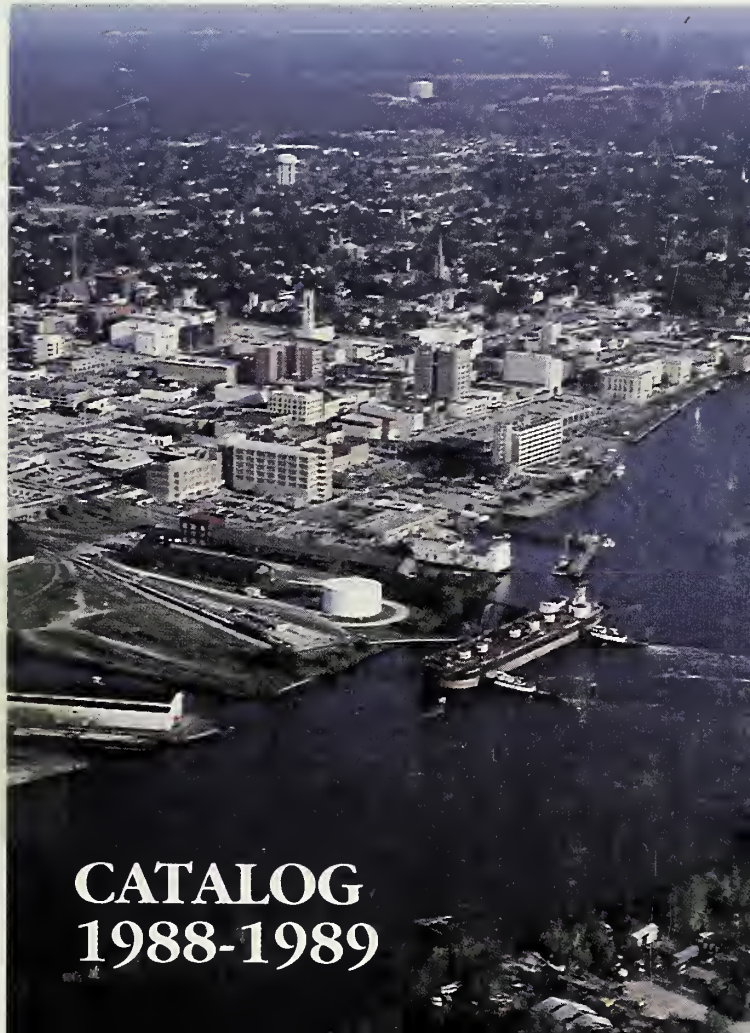
CAPE FEAR **COMMUNITY** COLLEGE

WILMINGTON, NORTH CAROLINA



CATALOG 1988-1989

NOTE

This catalog is published for the purpose of providing information about the college and its programs. Announcements contained herein are subject to change without notice and may not be regarded in the nature of binding obligations on the College or the State. Efforts will be made to keep changes to a minimum, but changes in policy by the North Carolina State Legislature, the Department of Community Colleges, or by local conditions may make some alterations in curricula, fees, etc., necessary.

PRIVACY RIGHTS ACT OF PARENTS AND STUDENTS

PUBLIC LAW 93-380—Cape Fear Community College adheres to the Guidelines developed by the Department of Health, Education and Welfare regarding the Privacy Rights of Parents and Students.

The College provides students and parents of dependent students access to official records directly related to them and limits dissemination of personally identifiable information without the students' consent. Students enrolled at Cape Fear Community College may review guidelines and procedures regarding Public Law 93-380 in the offices of Admissions and Records. Procedures for challenging such record may also be obtained in these offices.

NON-DISCRIMINATION POLICY

Cape Fear Community College's Board of Trustees and Staff recognize the importance of equal opportunity in all phases of the College's operations and have officially adopted a position of nondiscrimination on the basis of race, color, age, religion, national origin, physical handicap, or other non-relevant factors. This policy applies to both students and employees at all levels of the school's operations.

VISITORS

Visitors are always welcome at Cape Fear Community College. The Student Affairs office will provide guide service for groups or individuals on weekdays between 8:00 a.m. and 5:00 p.m. and will answer questions about the school and its programs. Prospective students are requested, when possible, to notify the Student Affairs office when they are going to visit. This will ensure that appropriate staff will be available for questions. The school is open until 10:00 p.m. Monday through Friday and individuals may visit at their convenience.

TYPESETTING BY
CFCC PRINTING DEPARTMENT

CAPE FEAR **COMMUNITY** COLLEGE

411 North Front Street
Wilmington, N. C. 28401
Phone (919) 343-0481

Cape Fear Community College is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award Associate in Applied Science and Associate in Arts degrees and is a member institution of the North Carolina Department of Community Colleges and the American Association of Community and Junior Colleges.

Catalog of Information

1988 - 1989

"ADMISSION TO ANY AND ALL EDUCATIONAL PROGRAMS OFFERED BY CAPE FEAR COMMUNITY COLLEGE IS MADE WITHOUT REGARD TO RACE, COLOR, SEX, RELIGION, NATIONAL ORIGIN, PHYSICAL HANDICAP OR OTHER NON-RELEVANT FACTORS."

VOLUME XXIII **APRIL 1988**

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FOREWORD

On behalf of the faculty, staff, trustees, and students, I want to extend to you an invitation to become a part of this outstanding institution. This catalog will furnish you with information that may well assist you in designing your personal and career goals. Most of the information you will need about Cape Fear Community College is contained in this catalog.

You will find the school to have a modern physical plant containing shops, laboratories, and classrooms designed to meet your educational and training needs. The facilities are among the finest in the North Carolina Community College System.

The members of the faculty and staff are well qualified and are anxious to assist you in reaching your educational goals by providing quality instruction and service.

If you decide to enroll, I am sure that you will find it is one of the finest colleges of its kind.

If you need additional information about the school, please feel free to call on me or any member of the faculty and staff.

Dr. E. Thomas Satterfield, Jr.
President

SCHOOL CALENDAR

1988 - 1989

FALL QUARTER

Pre-registration for Fall Quarter	August 1-3, 1988
Freshmen orientation	August 31, 1988
Freshmen registration	September 1, 1988
Returning students registration	September 2, 1988
Classes begin	September 6, 1988
Classes end	November 21, 1988
Holiday	September 5, 1988

WINTER QUARTER

Pre-registration for Winter Quarter	November 7-9, 1988
Registration	November 21 & 22, 1988
Classes begin	November 28, 1988
Classes end	February 27, 1989
Holidays	November 24 & 25, 1988
Holidays	December 19-30, 1988
Holiday	January 16, 1989

SPRING QUARTER

Pre-registration for Spring Quarter	February 6-8, 1989
Registration	February 27 & 28, 1989
Classes begin	March 6, 1989
Classes end	May 23, 1989
Holidays	March 24 & 27, 1989
Holiday	May 29, 1989

SUMMER QUARTER

Pre-registration for Summer Quarter	May 8-10, 1989
Registration	May 24 & 25, 1989
Classes begin	May 30, 1989
Classes end	August 15, 1989
Holiday	July 4, 1989

ADMINISTRATION

The Honorable Robert W. Scott,
Department of Community Colleges, State President.
Dr. E. Thomas Satterfield Jr.,
Cape Fear Community College, President.

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Mr. William C. Taylor, 125 Partridge Road, Wilmington, NC 28403
Mr. Franklin E. Williams, Sr., Route 3, Box 286A, Wilmington, NC 28403
President, Student Government Association, Cape Fear Community College

GENERAL INFORMATION

HISTORY

The College was established as the Wilmington Industrial Education Center in 1959 under the direction of the late George H. West. It was raised to technical institute status on July, 1, 1964, and renamed Cape Fear Technical Institute. To more clearly reflect the role and mission of the school, the Board of Trustees recommended that the school again change its name. The New Hanover County Commissioners concurred with the Board, and on January 1, 1988, the school officially became Cape Fear Community College (CFCC).

CFCC is one of fifty-eight such institutions operated by the State under the direction of the State Board of Community Colleges and administered by a local Board of Trustees. The System was authorized by the North Carolina General Assembly, Chapter 115D (originally 115A) of the General Statutes.

The College was one of the original industrial education centers and was operated from 1959 until 1963 by the New Hanover Board of Education. Following a favorable vote of the citizens of the County on a $575,000 bond issue to provide a technical institute facility, and a $0.02 tax levy for its support, $500,000 in matching funds from the 1963 Vocational Education Act Appropriation was authorized to be applied toward facility construction.

The College continued to operate in County owned buildings until new facilities were completed in the summer of 1967. These facilities included a four story main building, a separate automotive shop, and a pier and docking facility for the school's training vessels.

In the General Election of 1972 the citizens of New Hanover County approved another bond issue for $3,676,000 for the expansion of the College's facilities. This resulted in a modern seven story building that provided valuable additional classrooms, shop, and office space, with one floor devoted to the library.

In 1982 the New Hanover County Commissioners responded favorably to a request made by the Board of Trustees to purchase and renovate a temporary facility to house second year electronic and instrumentation technologies curricula. The building, located near the main campus, was renovated to meet the needs of the two curricula at a total cost to the County of $300,000.

The number of people served annually by the College has risen from approximately 750 during its early years of operation to more than 19,000 in recent years.

In 1969 the College was granted status as a Special Purpose Institute by the Southern Association of Colleges and Schools. The following year the Southern Association's Commission on Colleges granted membership to the College contingent upon successfully completing a self-study within the next five years. This was accomplished and at the Association's Annual Meeting in 1975, the College was granted membership status.

PURPOSE

Cape Fear Community College is comprehensive in its purpose and in its plan to meet the needs of the adults in the geographical area which it serves. The school strives to live up to "open door" admissions by providing opportunities at all levels of capability. The College encourages students to further develop their abilities, maintain positive attitudes toward the work place, and utilize what they have learned to enhance the development of their communities. To achieve these worthwhile goals Cape Fear Community College is committed to the following objectives:

a. To provide an effective teaching and learning environment conducive to students achieving their maximum potential;
b. To provide guidance and counseling services for academic and career choices and for personal growth;
c. To provide vocational and technical programs and general education courses that will prepare adults for employment in specialized fields;
d. To provide courses at the elementary and secondary level for adults who wish to further their education;
e. To provide courses and programs for adults who wish to improve their economic, social, and/or cultural needs;
f. To provide developmental courses that will improve reading and computational skills necessary for capable adults to succeed in educational programs;
g. To provide programs to serve new and existing businesses and industries by training and upgrading employees' skills;
h. To provide programs to serve the community by training personnel for public service;
i. To continually study and revise existing programs and implement new programs and/or curricula which will serve the changing needs of the College's geographical area;
j. To provide lifelong learning experiences for adults.

LOCATION

Cape Fear Community College is conveniently located in the heart of Wilmington on North Front Street. The campus extends from Front Street to the deep water channel of the Cape Fear River, and is bordered by Red Cross Street on the North and Walnut Street on the South.

The Fred J. Galehouse Building houses the administrative offices, business office, classrooms, chemical and criminalistics laboratories, and part of the shop areas. The M.J. McLeod Building houses the student affairs office, library, laboratories, classrooms, cafeteria, and the student lounge area. Two additional shop buildings (the Richard L. Burnett and the William T. Emmart) are located at the water's edge, and a pier extends out to the deep-water channel to provide mooring for the school's training vessels. The buildings are of all-masonry construction, and designed especially for trade and technical programs. All classrooms and offices are air-conditioned for year-round comfort.

The Wilmington area has abundant recreational facilities that include beaches, salt-water and fresh-water fishing, good hunting area, year-round golf courses and tennis courts.

SHOPS & EQUIPMENT

The shops and laboratory areas were carefully planned to provide large, well-ventilated, and industry-type training facilities.

Equipment for all shops, laboratories, test areas, drafting rooms, and for the training ships was selected to conform with the current tools and devices of industry. Students will find that ample opportunity is provided in all trade and technical curricula for skill-building practice in using modern, industrial tools and machines. Classrooms for study of the academic related subjects are conveniently located; a well-stocked technical library is available both day and night.

AREAS OF STUDY

Curricula which the College is presently authorized to offer include the following:

Technical Curricula:
(See Technical section (Green) of catalogue for descriptions.)

- Basic Law Enforcement (Certificate Program)
- Business Administration
- Chemical Technology
- Computer Engineering Technology
- Criminal Justice - Protective Services Technology
- Electronics Engineering Technology
- General Occupational Technology
- General Office
- Instrumentation Technology
- Marine Technology
- Mechanical Drafting and Design Technology
- Paralegal Technology
- Secretarial-Engineering and Technical

Students graduating from these programs are awarded the **Associate in Applied Science Degree.**

General Education
Students who graduate from the General Education Curriculum are awarded the **Associate in Arts Degree.**

Vocational Curricula:
(See trade section (Yellow) of catalogue for descriptions.)

- Air Conditioning, Heating & Refrigeration
- Automotive Mechanics
- Boat Building
- Child Care Worker
- Industrial Electricity
- Industrial Maintenance
- Light Construction
- Machinist
- Marine and Diesel Mechanics
- Practical Nursing
- Welding

A **diploma** is earned by graduates of these vocational programs.

ADMISSIONS CRITERIA AND INFORMATION

Introduction

CFCC follows the "Open Door" policy which provides for the admission of any North Carolina citizen who has reached the age of 18 or whose high school class has graduated or who has attained the GED certificate.*

While a high school education or its equivalent* is desirable for admission to the full-time training programs, some exceptions are made for individuals whose age and maturity make success in a diploma program likely. See individual course descriptions in this catalog for specific admission requirements, prerequisites, etc., for each course.

Previous Education

Each applicant shall request his or her high school to submit a transcript showing grades earned. Those who are high school seniors should have their school submit a transcript showing work through the first semester of the senior year as soon as possible after the semester has ended and a supplementary transcript showing graduation at the close of school.

Applicants who have the high school equivalency certificate (GED) should submit a copy of the certificate, but should also ask their high school to send a transcript of all work done at the school.

Transcripts of previous education in colleges, technical institutes, etc., should also be submitted to the school. All transcripts must come directly from the school to the College and not from the applicants themselves.

Placement Test

Students are required to take a placement test prior to entrance. Qualified counselors at the school use the test results in helping individuals decide which course of study to follow. There is no charge for the test, nor for the counseling service.

Personal Interview

The personal interview is beneficial to both the applicant and to school officials in that it affords an opportunity to "get acquainted." The applicant has an opportunity to ask questions about the school and its programs while school officials make an effort to evaluate the applicant's interest in and capability to pursue the program of study applied for.

*See page 155 in General Adult Education Section of this catalog for details about the high school equivalency certificate.

Medical Examination
After being accepted for admission, students in certain programs of study will be required to submit a completed medical form.

Other
In addition to the general admission requirements, it may also be required that certain students with academic deficiencies take additional course work to strengthen their weaknesses.

Certain curricula may have special requirements in addition to the above stated criteria.

Admissions Checklist
The applicant must complete the following procedures:

1. Submit completed application.
2. Have transcripts of all previous education mailed to the College, which includes high school and/or GED certification.
3. Take placement test.
4. Come to the school for a personal interview and do additional testing when necessary.
5. Submit medical form (after being accepted.)

Admission of Out-of-State Students
Out-of-state students are admitted under the same admission standards as residents of North Carolina. Residency classification for out-of-state students will be determined by the laws of the State of North Carolina. At the time of admission, the Director of Admissions will determine the residency status of the applicant based on the information supplied on the application and any other data deemed appropriate by the Director of Admissions. If the applicant is not satisfied with the residency classification assigned by the Director of Admissions, an appropriate form for appeal is available in the Office of Student Affairs, but must be filed within ten (10) days following the first notification of residency status. Applicants wishing additional information about the laws of North Carolina governing residency classification for students should make inquiry to the Office of Student Affairs, where copies of the law are maintained.

Admission of Non-Immigrant Alien Students
The school is authorized under Federal law to admit non-immigrant alien students.

ADMITTED STUDENT INFORMATION

Transfer Within the College
Students who desire to change from one program to another must submit their request to the Admissions Office. Such requests will be carefully reviewed and students will be notified by the Admissions Office of its decision. In cases where students are permitted to change programs, prior satisfactory credits earned may be applied to the requirements for the new program where applicable.

Proficiency Examination
Credit by proficiency examination may be given for a course. Eligibility to take a proficiency examination may be based on high achievement in secondary schools, post secondary schools, or experience. Arrangements for examination should be made with the major subject instructor, Division Head, and Dean of Student

Freshman Orientation
Freshman Orientation is provided for full time students entering for the first time. Orientation informs the student about the academic and social policies of the College, and acquaints him or her with the library and other facilities. Upperclassmen assist in orientation and help answer questions about the College's policies and procedures.

Registration
Students who have been admitted, and who have paid their tuition deposit (see page 17 for information on this deposit) will register on the dates set by the school for this purpose. Students will obtain their class schedules and pay their fees at that time.

Quarter System
The school year is divided into four quarters of 55 school days. Credits earned are in quarter hours. See course description section for number of credits required for graduation in each program.

Course Load
A student who carries a minimum of 12 quarter hours is considered a full time student. The normal load is 14-18 quarter hours. A student may carry a maximum of 24 quarter hours credit. Any exception to this rule must be approved by the Dean of Student Affairs.

Auditing Courses
Students who wish to audit courses must register for the audit by following the regular registration procedures. Auditing students receive no credit and are not required to participate in class discussion or take tests. The fees for audit courses are the same as those taken for credit.

Drop/Add/Late Registration
Students will be allowed to drop or add a class or register during the first five (5) days of each quarter.

TUITION, FEES, AND REFUNDS

Tuition is established by the North Carolina State Legislature and is subject to change without prior notification. Currently tuition is charged at the following rates for all curriculum courses:

Tuition

North Carolina Students:
Full Time ..... $75.00 per quarter
Part Time ..... $6.25 per quarter hour credit

Out-of-State Students:
Full Time ..... $702.00 per quarter
Part Time ..... $58.50 per quarter hour credit

Personnel in the Armed Services
Any member of the armed services who qualifies for admission shall be charged the out-of-state rate but will pay the in-state rate with the sponsoring service paying the difference in the two rates.

Any dependent relative of a member of the armed services who is abiding in this State incident to active military duty while sharing the abode of that member shall be eligible to be charged the in-state tuition rate.

Late Registration Fee
Any student who registers or pays tuition and fees after the designated registration period will be assessed a $5.00 late fee.

Other Costs
Books and small tools are purchased by students as they are needed. The College attempts to keep the cost of books and tools at a minimum.

A $5.00 activity fee is charged at the beginning of Fall, Winter and Spring quarters.

All students who work in laboratories or shops are required to have accident insurance; this insurance may be purchased annually or quarterly at the time of registration. All insurance expires on August 31 of each school year.

Parking permits may be purchased for $6.00 at the time of the student's initial registration. Parking permits are valid through August of the current school year.

Payments
When an applicant is officially admitted to a course of study, he or she is required to make a $15.00 tuition deposit. This deposit is nonrefundable except in cases where the school is unable to admit the person or unable to offer the course applied for.

All tuition and fee charges are due and payable on the day of registration. Any deferred payments or exceptions to rules on financial affairs must be approved by the Dean of Fiscal Affairs.

The accident insurance is purchased on registration day of the first quarter of attendance.

No student will be permitted to graduate, nor will a transcript be issued until all financial obligations to the school are satisfied.

Refunds
A tuition refund for students shall not be made unless the student is, in the judgment of the college, compelled to withdraw for unavoidable reasons. In such cases, two-thirds (2/3) of the student's tuition may be refunded if the student withdraws within ten (10) calendar days after the first day of classes as published in the school calendar and requests such refund in writing. Tuition refunds will not be considered after that time.

(Tuition refunds will not be considered for tuitions of five dollars ($5.00) or less; if a course or curriculum fails to materialize, all the student's tuition shall be refunded.)

WITHDRAWAL

Students desiring to withdraw from school must contact the Admissions Office to obtain the necessary forms and procedures for official withdrawal. A student who fails to withdraw officially will receive a grade of "NC" (No Credit).

Students who withdraw from a course(s) within 21 calendar days from its scheduled beginning will receive a grade of "W" (Withdraw) which will not be computed in the GPA (Grade Point Average). Students who withdraw from a course(s) after this period must receive a grade of "WP" (Withdraw Passing) or "WF" (Withdraw Failing). WP's will not be computed in the GPA whereas WF's will be computed as a failing grade.

Students who withdraw after the eighth week of classes must obtain permission in writing from the Dean of Student Affairs and the instructor, unless the student is completely withdrawing from school.

STUDENT FINANCIAL AID

It is required that each applicant for financial assistance complete and submit the Financial Aid Form to the appropriate College Scholarship Service Office. The Financial Aid Form can be obtained by writing the Office of Financial Aid.

It is also required that each aid applicant complete and submit the College Application for Financial Aid to the Office of Financial Aid .

Financial Aid recipients are required to maintain satisfactory progress toward completing a degree, diploma, or certificate. Students will be given a copy of the policy which governs "satisfactory progress" at the time the financial aid award is made. Questions regarding financial aid should always be made to the Director of Financial Aid.

In addition to the Financial Aid programs listed below, there are numerous scholarships and a limited number of loans available to eligible students. For complete details write to the Director of Financial Aid and request a copy of the **Financial Aid Handbook.**

Grants

Pell Grants (Title IV)-formerly known as BEOG—This award is granted through the Federal Government for students in need of financial assistance. It does not have to be repaid. Depending upon the need factor and cost of education, Pell Grant awards range from $113 to $2100 yearly. You must apply each year.

Supplemental Educational Opportunity Grants (SEOG) (Title IV)—The SEOG is awarded by the College to students who have demonstrated financial need. It does not have to be repaid. The grant ranges from a minimum of $200 to a maximum of $2000 yearly, depending upon need and availability of funds. In order to be considered, a Financial Aid form must be submitted to College Scholarship Service for needs analysis. A College application for aid must also be filed in the Financial Aid Office.

North Carolina Student Incentive Grant Program (NCSIG)—Funds are provided by the North Carolina Education Assistance Authority to help needy students obtain their educational goal. Eligibility requirements are as follows: (1) must be a legal resident of North Carolina, (2) demonstrate substantial financial need, (3) be enrolled as a full time student, and (4) maintain satisfactory progress.

Other Financial Assistance

College Work Study (Title IV)—The College participates in the College Work Study Program, which provides the student an opportunity to earn a portion of their college expenses by working while in school during the regular academic year. Those interested in this program should contact the Financial Aid Office located in the Division of Student Affairs.

Vocational Rehabilitation—Vocational Rehabilitation is a program operated through the Division of Vocational Rehabilitation in cooperation with the North Carolina Department of Administration. The Division finances such services as are necessary to enable a physically or mentally employment-handicapped person to become self supporting. Financial assistance is available for training at Cape Fear Community College for eligible handicapped persons. If a prospective student has a physical disability or is limited in his/her activity because of a disability, he/she should contact the nearest Division of Vocational Rehabilitation Office. The Division Office for North Carolina is located at 709 Market Street, Wilmington, NC.

"G.I. Bill" Educational Benefits

Veterans Educational Benefits-This program assists veterans as well as widows and/or children of eligible deceased or disabled veterans.

The educational benefits available under the G.I Bill are administered by the Veterans Administration which also is the final authority for determining eligibility. These benefits are not only available to eligible veterans, but also the spouses and children of certain categories of living and deceased veterans, and to certain active duty military personnel, reservists and members of the National Guards.

Prospective students who believe they may be eligible for G.I. Bill benefits should contact the Veterans Affairs Office at the school for the address of the nearest Veterans Administration Office.

For detailed information about Veterans Educational Benefits, contact the campus Veterans Affairs Office in S-201, M.J. McLeod Building, or the nearest Veterans Administration field office.

ATTENDANCE AND TARDINESS

The nature of the programs for students is such that it is necessary that students be in regular attendance to obtain maximum benefit from their courses. Students should aspire to a perfect attendance record at all times.

Standards of attendance must be established to provide student accountability required by various agencies associated with CFCC and to encourage student participation for the greatest possible benefit to the student.

In addition to any other requirements, students must be in attendance at least 80% of the clock-hours of a course to receive credit. Those who do not meet minimum attendance requirements will be given the grade of "NC" (No Credit), which will be computed in the student's grade point average as a failing grade.

Special note to Marine Technology students: Students in the Marine Technology curriculum are at times involved in cruises on the ship that might take place during a holiday or quarter break during which time students are normally off. When such occurs, students must participate in the cruise.

GRADING

Grading is done by the traditional method of "A" through "D," along with negative categories such as "F" (Failure), "WF" (Withdraw Failing) and "NC" (No Credit, Irregular Withdrawal). A full explanation of grading and grade point averaging is addressed in the **STUDENT HANDBOOK** which is given to all new students. Interested prospective students can obtain a copy of the "Handbook" by writing the Dean of Student Affairs.

GRADE	SIGNIFICANCE	QUALITY POINTS PER QUARTER HOUR
A	Superior	4
B	Good	3
C	Average	2
D	Poor	1
F	Failure	0
I	Incomplete	0
AU	Audit	0
W	Withdraw	0
WP	Withdraw Passing	0
WF	Withdraw Failing	0
NC	No Credit	0
S*	Satisfactory	0
U*	Unsatisfactory	0
CR	Credit by Exam	0
CT	Credit by Transfer	0

*Grades assigned to developmental courses which do not count toward graduation requirements

Incomplete Grades
Incomplete will be given only when circumstances justify additional time to complete the course. An incomplete must be removed within six weeks following the first day of the next quarter it was received. Grades not made up within six weeks will be recorded as an "F."

Grade Appeal Policy
The College grade appeal policy can be found in the **STUDENT HANDBOOK.**

Quarter Hour Credit
Each course listed is followed by a notation on the number of quarter hours it carries. Normally, the number of quarter hours earned is based on the number of class, laboratory or shop hours spent under the supervisor or the course instructor per week for the quarter. Usually one quarter hour credit is given for each lecture hour of class per week, for each two hours of laboratory work per week, or for each three hours of shop or manipulative laboratory per week. (A class hour is usually defined as 50 minutes of instruction.) Exceptions may be made in cases where specific classification is not feasible.

REQUIREMENTS FOR GRADUATION

To receive the Associate in Applied Science Degree,the Associate in Arts Degree, or a Diploma, a student must maintain satisfactory grades in all laboratory and class subjects and an overall "C" average or a grade point average of at least 2.00. (See **STUDENT HANDBOOK** for full explanation of Grade Point Average.

SCHOLASTIC HONORS

Full time (12 or more quarter hours credit) students who have earned a grade point average of 3.50 with no grade lower than "C" will be placed on the Dean's List.

GRADUATION WITH DEPARTMENTAL HONORS

Those members of the graduating class who have demonstrated outstanding leadership, attitude and ability will be graduated with departmental honors. Since these are departmental awards, recipients are selected by lead instructors in cooperation with appropriate faculty members.

ACADEMIC REQUIREMENTS

Each student is expected to make satisfactory progress toward obtaining a degree or diploma. At the end of each quarter, a student's Grade Point Average (GPA) is examined. The minimum accumulative GPA for remaining in good standing is as follows:

Attempted Credit Hours	Diploma	Degree
1 - 23	1.25	1.25
24 - 40	1.40	1.40
41 - 59	1.70	1.55
60 - 80	2.00	1.75
81 - 100		1.90
101		2.00

PROBATION AND SUSPENSION

Academic

A student who falls below the accumulative GPA requirements will be placed on academic probation for the following quarter. A student placed on academic probation will be notified in writing by the Admissions Office. A student on academic probation should schedule a conference with a counselor after he or she is so notified about his or her probationary status. Any student on probation who

fails to make satisfactory improvement during the following quarter may be suspended or advised to enter a more appropriate program. Upon request, a student suspended for academic reasons may be readmitted if, after a conference with a counselor, it is determined that the student would benefit from continued academic pursuit. Subsequent suspensions could result in the student not being readmitted again.

Conduct
Any student whose conduct becomes unsatisfactory may be placed on conduct probation; however, a student is subject to immediate suspension if deemed necessary by the Dean of Student Affairs. Any misconduct after a person is placed on conduct probation will result in prompt suspension.

Special Note to Persons Attending Under the G.I. Bill
At any time a student, attending school under the G.I. Bill, fails to meet the required accumulative GPA, that student will be placed on academic probation for a period of one quarter. If, at the end of the probationary period, the accumulative GPA is below that required by the College, the Veterans Administration will be notified that the student has been "de-certified" for G.I. Bill payment purposes. If such a student continues to attend CFCC, the veterans administration will be notified when the student has achieved an acceptable accumulative GPA. Recertification by the V.A. for pay purposes will be retroactive to the starting date of the quarter in which satisfactory progress resumed.

RIGHT OF APPEAL

Any student who is dismissed from school for academic or disciplinary reasons may have his or her case reviewed by requesting such through the Dean of Student Affairs, who, in turn, will bring his or her case before the Admissions and Student Affairs Advisory Committee. The appeal may be carried to the Board of Trustees at the student's request.

TRANSCRIPT OF RECORDS

Upon request of the student, a transcript of credits earned at Cape Fear Community College only will be sent to other schools and/or industry. There is no charge for this service. Requests should be made to the Registrar's Office.

COUNSELING SERVICES

Qualified counselors are available to assist students in selecting an appropriate course of study, to provide occupational and educational information and to discuss scholastic or personal problems which may arise.

CAREER PLANNING AND PLACEMENT

Career Planning

The major function of the Career Planning and Placement Office is to provide career counseling and job placement information to students and alumni. Some of the career counseling services made available through this office are:

1. Special help in the development of job search techniques.
2. Information as to present and future employment trends.
3. Statistical information about graduates' employment.
4. Business/industry literature and directories.
5. Administration and interpretation of vocational interest inventories.

The job placement function of the office, with the help and support of faculty and staff, is to assist students and graduates in securing job positions in their chosen fields. To maintain information about current job openings, frequent contact is made with local businesses and industries. Also, the Career Planning and Placement Office coordinates on-campus company recruitment of students and CFCC alumni throughout the year.

Testing Services

The purpose of CFCC admissions placement is to provide the school's admissions counselors with information about applicants' verbal, numerical, mechanical and finger dexterity skills. These scores, along with other admissions information, enables counselors to assist students in deciding on courses and/or programs of study.

CFCC placement tests are given frequently during the year. Times for testing vary (morning, afternoon, evening) in order to meet the needs of students.

STUDENT ACTIVITIES

Extra-curricular activities are a very important part of the total educational program. The school encourages the development of additional activities and as such have designed procedures for establishing clubs that are officially sanctioned by the school. These procedures may be found in the **STUDENT HANDBOOK.**

Among the intercollegiate activities offered are basketball, softball, golf and tennis. Intramural activities offered by the school include volleyball, touch football, chess, and table tennis.

The student government is a very active organization at this school. The voice of the student body paves the way for good lines of communication between the students and the administration.

The student newspaper, student handbook, and school annual are among the publications done by the students. Students interested in any aspect of such publications are encouraged to participate.

Many students donate their time and energies to projects under the guidance of instructors and community leaders by participating in some type of service club.

The school is a member of the Eastern Carolina Community College Athletic Conference which includes nine other community colleges.

HEALTH SERVICES

Health Services provided: (1) First aid and emergency care is available on campus. (2) Referrals for illness and injury that cannot be taken care of by individuals concerned are made to community health facilities. (3) A drug abuse prevention program is sponsored by the school which includes distribution of available literature, providing audio visual materials, making available through the Library a limited number of current books on the subject, and a counseling service that refers students to local health professionals trained in the area of substance abuse. In case of illness or injury requiring transportation, the Student Affairs Office should be contacted immediately.

THE LIBRARY

The Library is located on the sixth floor of the M.J. McLeod Building. It currently has some 27,000 books in the open-stack collection and subscribes to more than 400 magazines and newspapers. Other materials available for patron use include 7,000 rolls of microfilms of back issues of magazines and genealogical materials; approximately 2,000 out-of-print books in microfiche format; and several hundred maps and charts frequently utilized in the instructional programs. A collection of phonograph recordings is available for patron listening. The North Carolina Employment Security Commission Job Placement Service listing of current jobs in North Carolina is received by the library and is available for patron use in the microfiche section. Interlibrary loan service is available for all patrons. Typewriters, calculators, photocopy facilities, microfiche reader/printer are available for patron use.

While the activities and materials collections of the Library, for the most part, are related to the programs of instruction offered and exist primarily for the students, faculty, and staff of the College, all adult residents of the area, particularly industrial employees, may utilize the Library.

THE AUDIO VISUAL SERVICE CENTER

The CFCC Audio Visual Service Center is located on the fifth floor, Room S-513 of the M.J. McLeod Building. Currently there are more than 2,100 software materials in different media formats related to the various courses of study.

The CFCC Audio Visual Service Center's major purpose is to support the educational efforts of the College.

SEXUAL HARASSMENT

Discriminatory personal conduct, including sexual harassment toward any member of the College, is a violation of both State and Federal law and school policy and cannot be tolerated in the College community.

All members of this school community are expected and instructed to conduct themselves in such a way as to contribute to an atmosphere free of sexual harassment. Sexual harassment of any employee or student by any other employee or student is a violation of the policy of this school and will not be tolerated.

Requests for sexual favors and other unwelcomed verbal or physical conduct of a sexual nature by any employee or student constitutes sexual harassment when:

- submission to such conduct is made either explicitly or implicitly a term or condition of an individual's employment, academic or student status, or
- submission to or rejection of such conduct by an individual is used as the basis for employment decisions affecting that individual, or
- such conduct has the purpose or effect of interfering with an individual's performance or creating an intimidating, hostile, or offensive environment in the work place or the classroom.

Any student who believes that he or she has been subjected to sexual harassment in violation of this policy should make a confidential complaint to one of the Student Affairs counselors. If this is not feasible, the student may take the complaint to the Dean of Student Affairs.

GRIEVANCE PROCEDURE

If any student or prospective student feels that he or she has been discriminated against or denied service on the basis of race, color, national origin, religion, or sex, he or she should report such to the Dean of Instruction.

If any student or prospective student feels that he or she has been discriminated against or denied services on the basis of handicap, he or she should report such to the Dean of Instruction, who is the Section 504 Coordinator.

DRESS

Where special dress or safety devices are required by the College, Department of Community Colleges regulations, or public law, the student will be expected to conform. Students are expected to maintain good personal grooming consistent with the ordinary requirements of industry.

CONDUCT

It is expected that at all times the student will conduct himself/herself as a responsible adult. Participation in any activity which, in the opinion of the administration, disrupts the educational process or functioning of the college may result in disciplinary action. Specific violations of conduct include, but are not limited to the following:

a. destruction of school property
b. stealing
c. cheating
d. gambling
e. use of profane language
f. engaging in personal combat
g. possess or carry, whether openly or concealed, any weapon on campus The only exception to this directive is in the case where training or job requirements of the students or employee requires that such be carried
h. possession and/or use of alcoholic beverages
i. possession and/or use of any drug as defined under the North Carolina Controlled Substance Act, G.S. 89-90 through G.S. 90-94.

The State of North Carolina has issued procedures to be followed in cases of disruptive conduct. Therefore, such prescribed procedures will be followed at all times.

Violation of these rules of conduct will not be tolerated in or on any part of the campus, its satellites, equipment it operates, or wherever its employees or students are required to be while performing their duties as students or employees. Any violation of these standards of behavior may result in dismissal from the College.

Area of classroom rules will be designated by instructors or supervisors and must be followed by all.

WEAPONS ON CAMPUS

It is unlawful for any person to possess or carry, openly or concealed, any weapon on campus. The only exception made to this directive is in the case where training or job requirements of the student or employee requires that such a weapon be carried.

DEVELOPMENTAL STUDIES

It is not uncommon for a student to enter college who, for some reason, is deficient in the basic skills of English and/or mathematics. Recognizing this and being committed to making every opportunity available for students to help ensure their success, the school established a Developmental Studies program. This program is designed to help students gain the necessary skills in English and/or mathematics that will allow them to enter the curriculum program of their original choice. Successfully passing these developmental courses will ensure the student has the basic skills in English and/or mathematics to function at the required entry level. These courses are required for those students who have been identified by the Admissions Office as needing enhancement in either English or mathematics, or both.

Developmental courses earn credit; however, such credit does not apply toward the required hours for receiving a degree or certificate. Developmental courses are graded as "S," Satisfactory, or "U," Unsatisfactory. A satisfactory "S" grade is required on these course offerings before an individual will be allowed to enter the math and/or English sequence for which the developmental course is required (See Technical or Trade Course Descriptions for details.

ALUMNI

The Alumni Association was organized in order to strengthen old and create new bonds of friendship and to promote interest and support for the continued growth of the College. Membership is open to anyone who has attended the school and has completed one full quarter of curriculum study. Associate memberships are available to those who have participated in a program of continuing education and

to those who have not attended, but share a sincere interest in the future of the College. Efforts are made through public news media to inform all members of current Alumni activities, including business meetings, fund-raising, and social events.

TECHNICAL PROGRAMS

Technicians are among the fastest growing occupational groups in the United States. In recent years, the needs of an expanding and increasingly technical economy have greatly intensified the demand not only for engineers and scientists, but also for the technical workers who assist them. Technicians are those workers whose jobs require both knowledge and use of scientific and mathematical theory, specialized education or training in some aspect of technology or science, and work, usually, with scientists and engineers. Some jobs held by these technicians are supervisory and require both technical knowledge and the ability to supervise people.

In carrying out their assignment, engineering and science technicians frequently use complex electronic and mechanical instruments, experimental laboratory apparatus, and drafting instruments. These workers engage in virtually every aspect of engineering and scientific work. In research, development, and design work they conduct experiments or tests; set up, calibrate, and operate instruments; and make calculations. They also assist scientists and engineers in developing experimental equipment and models by making drawings and sketches and frequently do some design work.

Technicians also work in jobs related to production. They may aid in the various phases of production operations, such as working out specifications for materials and methods of manufacturing, devising tests to insure quality control of products, or making time-and-motion studies (timing and analyzing the worker's movements) designed to improve the efficiency of a particular operation. They may also perform liaison work between engineering and production or other departments.

Cape Fear Community College provides training in a number of areas which require training beyond the high school, but do not require four years of college preparation. Most of the technical programs are six quarters in length and are geared to train a person in specific technical areas. Students spend twenty to thirty hours per week in classroom and laboratory work; additional time will be needed for outside assignments.

The Associate in Applied Science degree is awarded to students who complete a technical program. To be eligible for the degree, a student must maintain satisfactory grades in all laboratory and class subjects and an overall grade point average of 2.00.

Credit hours granted in the various technical programs are not transferrable to other institutions except as an institution may determine that a particular course and credits are applicable to a curriculum offered by that school.

AUTHORIZED PROGRAMS

Basic Law Enforcement Training (Certificate Program)
Business Administration
Chemical Technology
Computer Engineering Technology
Criminal Justice - Protective Service Technology
Electronics Engineering Technology
General Education
General Occupational Technology
General Office
Instrumentation Technology
Marine Technology
Mechanical Drafting and Design Technology
Paralegal Technology
Secretarial - Engineering and Technical

BASIC LAW ENFORCEMENT TRAINING

The Basic Law Enforcement Training curriculum certificate program prepares individuals to take the Basic Training — Law Enforcement Officers certification examination mandated by the North Carolina Criminal Justice Education and Training Standards Commission and/or it prepares individuals to take the Justice Officers Basic Training certification examination mandated by the North Carolina Sheriffs' Education and Training Standards Commission. Successful completion of this curriculum certificate program requires that the student satisfy the minimum requirements for certification by the Criminal Justice Commission and/or the Sheriffs' Commission. The student satisfactorily completing this program should possess at least the minimum degree of general attributes, knowledge and skills to function as an inexperienced law enforcement officer.

Job opportunities are available with state, county, and municipal governments in North Carolina. In addition, knowledge, skills and abilities acquired in this course of study qualify one for job opportunities with private enterprises in such areas as industrial, retail, and private security.

To be eligible to take this course you must be twenty (20) years of age if you are considering employment with a Police Department and twenty-one (21) years of age with the Sheriffs Department. Also, you will need a letter of sponsorship either from a Police or Sheriff's Department.

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
CJC 214 Pre-Service Law Enforcement Training (Clock Hours 121)	2	0	9	5
CJC 215 Law Enforcement Probationary Training (Clock Hours 253)	11	0	12	15
CJC 216 Police Officer Training (Clock Hours 22)	2	0	0	2
CJC 217 Deputy Sheriff Training (Clock Hours 33)	1	2	0	2
	16	2	21	24

See pages 63 to 106 for course descriptions

BUSINESS ADMINISTRATION

The Business Administration curriculum is designed to prepare an individual for entry into middle-management occupations in various businesses and industries. The curriculum provides an overview of the business and industrial world, its organization and management.

The purpose of the curriculum will be fulfilled through courses designed to develop competency in understanding the principles of organization and management in business operations, utilizing modern techniques to make decisions, understanding the economy through study and analysis of the role of production and marketing, communicating orally and in writing, and interpersonal relationships.

Through these skills and through development of personal competencies and qualities, the individual will be able to function effectively in middle-management activities in business or industry.

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER				
BUS 102 Typewriting I	2	0	3	3
BUS 115 Business Law I	5	0	0	5
ENG 105 Grammar and Composition	3	2	0	4
MAT 110 Business Mathematics	5	0	0	5
SOC 102 Principles of Sociology	3	0	0	3
	18	2	3	20
SECOND QUARTER				
BUS 103 Typewriting II	2	0	3	3
BUS 120 Accounting I	5	2	0	6
ENG 106 Grammar and Composition	3	2	0	4
MAT 130 Advanced Business Mathematics	5	0	0	5
SOC 206 American Institutions	3	0	0	3
	18	4	3	21
THIRD QUARTER				
BUS 121 Accounting II	5	2	0	6
EDP 104 Data Processing Theory	3	0	0	3
ENG 104 Reading and Composition	3	0	0	3
ENG 204 Oral Communication	3	0	0	3
___ ___ Elective	3	0	0	3
	17	2	0	18

FOURTH QUARTER					
BUS 122	Accounting III	5	2	0	6
BUS 128	Computerized Accounting - Electronic Spreadsheet	1	2	0	2
BUS 229	Taxes I	3	2	0	4
ECO 102	Economics I	3	0	0	3
EDP 250	BASIC Business Programming	2	2	0	3
		14	8	0	18
FIFTH QUARTER					
BUS 123	Business Finance I	3	2	0	4
BUS 222	Word Processing	2	0	3	3
BUS 230	Taxes II	3	2	0	4
BUS 239	Marketing	5	0	0	5
ECO 104	Economics II	3	0	0	3
___ ___	Elective	3	0	0	3
		19	4	3	22
SIXTH QUARTER					
BUS 124	Business Finance II	3	2	0	4
BUS 125	Accounting IV	5	2	0	6
BUS 232	Sales Development	3	0	0	3
BUS 235	Business Management	3	2	0	4
PSY 217	Introduction to Psychology	3	0	0	3
		17	6	0	20

See pages 63 to 106 for course descriptions.

CHEMICAL TECHNOLOGY

The Chemical Technology curriculum prepares individuals as research assistants to chemists in the laboratory or as planning and production assistants to chemical engineers in actual industrial production.

Chemical technicians perform quantitative and qualitative chemical analyses of processes involved in research, production, or monitoring situations. They test samples of raw materials to determine that they are within specification limits required, analyze samples of finished products to determine quality and prepare laboratory test reports, check chemical analyses with specifications, and operate electronic laboratory equipment.

CHEMICAL TECHNOLOGY

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER				
CHM 114 Basic Chemical Concepts I	5	0	6	7
ENG 101 Grammar	3	0	0	3
HED 120 First Aid	2	0	0	2
MAT 121 Technical Mathematics	5	0	0	5
PSY 217 Introduction to Psychology	3	0	0	3
	18	0	6	20
SECOND QUARTER				
CHM 115 Basic Chemical Concepts II	5	0	6	7
ENG 102 Composition	3	0	0	3
MAT 122 Technical Mathematics	5	0	0	5
SOC 102 Principles of Sociology	3	0	0	3
___ ___ Elective	3	0	0	3
	19	0	6	21
THIRD QUARTER				
BIO 110 General Biology	3	2	0	4
CHM 116 Descriptive Chemistry	3	0	6	5
CHM 230 Organic Chemistry I	3	0	0	3
ENG 103 Report Writing	3	0	0	3
PHY 100 Introductory Physics	4	2	0	5
	16	4	6	20
FOURTH QUARTER				
CHM 117 Unit Processes	1	0	18	7
CHM 150 Industrial Operations	5	0	0	5
___ ___ Elective	3	0	0	3
	9	0	18	15
FIFTH QUARTER				
CHM 231 Organic Chemistry II	3	0	6	5
CHM 243 Industrial Analysis I (Qualitative)	1	0	6	3
ENG 204 Oral Communication	3	0	0	3
PHY 105 Physics: Heat and Fluids	3	2	0	4
	10	2	12	15
SIXTH QUARTER				
BIO 215 Microbiology	3	4	0	5
CHM 232 Organic Chemistry III	3	0	3	4
CHM 244 Industrial Analysis II (Quantitative)	1	0	9	4
PHY 103 Physics: Electricity	3	2	0	4
	10	6	12	17
SEVENTH QUARTER				
CHM 233 Biochemical Concepts	3	2	0	4
CHM 245 Industrial Analysis III (Quantitative)	3	0	9	6
FST 106 Nuclear Radiation Monitoring	3	0	0	3
MEC 235 Hydraulics and Pneumatics	3	0	3	4
	12	2	12	17

See pages 63 to 106 for course descriptions.

COMPUTER ENGINEERING TECHNOLOGY

This program is intended to provide the skills required to install, service, and maintain computers, microprocessor and computer controlled equipment and computer peripheral devices.

The curriculum provides training in both the hardware and software areas of the computer field.

A sequence of introductory hardware courses provides the student with a strong background in physics, technical mathematics, electricity, electronics and digital logic circuits and concepts. Advanced course work provides a detailed study of the logic of the central processing unit, the operation of integrated circuits in the central processing unit, the operation and use of integrated circuit memory devices, and the interfacing of the central processing unit to memory devices. Additional studies cover interfacing the central processing unit to external devices using both serial and parallel data transfer, the operation of large scale integrated programmable interface units and their interfacing with the central processing unit, and the operation of computer peripheral devices such as video displays, printers, floppy disk storage systems, magnetic type units, keyboards and the techniques of converting signals between the analog and digital forms.

The programming course work provides a sequence of study stressing good program design techniques and structured programming, and program documentation. Rather than being familiar with a large number of programming languages, the student is expected to learn well a highly structured language, such as PASCAL, and an Assembly Language. The importance of Assembly Language to the understanding of the operation of the central processing unit and the related computer units is stressed. Computer operating system concepts are discussed to provide an unified view of the hardware and software aspects of the computer system.

Prerequisites: In addition to general admissions requirements, at least one year of high school algebra or the equivalent is required.

COMPUTER ENGINEERING TECHNOLOGY

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER				
ELC 107 Electricity I	3	0	6	5
ELN 102 Electronic Fabrication Techniques	0	2	0	1
ELN 106 Electronics I	2	0	6	4
ENG 101 Grammar	3	0	0	3
MAT 121 Technical Mathematics	5	0	0	5
	13	2	12	18
SECOND QUARTER				
ELC 108 Electricity II	3	0	6	5
ELN 107 Electronics II	3	0	6	5
ENG 102 Composition	3	0	0	3
MAT 122 Technical Mathematics	5	0	0	5
	14	0	12	18
THIRD QUARTER				
ELC 109 Electricity III	3	0	6	5
ELN 108 Electronics III	3	0	6	5
MAT 123 Technical Mathematics	5	0	0	5
PHY 101 Physics: Properties of Matter	3	2	0	4
	14	2	12	19
FOURTH QUARTER				
DFT 100 Technical Drafting	1	0	3	2
ELN 109 Electronics IV	3	0	6	5
ELN 110 Introduction to Digital Electronics	3	0	6	5
ENG 103 Report Writing	3	0	0	3
PHY 102 Physics: Work, Energy, and Power	3	2	0	4
	13	2	15	19
FIFTH QUARTER				
EDP 201 BASIC Language Programming I	2	0	3	3
ELN 240 Computer Project (Digital)	0	0	6	2
ELN 241 Digital Principles and Applications	2	0	3	3
ELN 243 Computer Electronics	0	0	6	2
ELN 250 Introduction to Microprocessors	0	0	3	1
PSY 217 Introduction to Psychology	3	0	0	3
___ ___ Elective	3	0	0	3
	10	0	21	17
SIXTH QUARTER				
EDP 210 BASIC Language Programming II	2	0	3	3
ELN 244 Computer Project (Microprocessor)	1	0	3	2
ELN 245 Peripheral Devices	1	0	6	3
ELN 251 Microprocessors I	2	0	6	4
ENG 204 Oral Communication	3	0	0	3
SOC 102 Principles of Sociology	3	0	0	3
	12	0	18	18

SEVENTH QUARTER					
BUS 272	Principles of Supervision	3	0	0	3
ELN 247	Computer Project (Microcomputer)	0	0	3	1
ELN 249	Computer Interfacing	0	0	3	1
ELN 252	Microprocessors II	2	0	6	4
ELN 255	Computer Systems	3	0	3	4
___ ___	Elective	3	0	0	3
		11	0	15	16

See pages 63 to 106 for course descriptions.

CRIMINAL JUSTICE - PROTECTIVE SERVICE TECHNOLOGY

The Criminal Justice Technology curriculum is designed so that it may be a multi-faceted program of study. It may consist of study options in corrections, law enforcement and security services.

The curriculum is designed with a core of courses to afford one the opportunity to acquire basic knowledge, skills and attitudes in the generally accepted subject areas associated with a two-year study of correctional services, law enforcement services and security services. It includes subjects such as interpersonal communications, law, psychology and sociology.

In addition to core subjects, the correctional services option provides an opportunity to study other generally accepted subjects indigenous to a two-year correctional services program such as confinement facility administrations, correction law, counseling, probation-parole services and rehabilitation options. Similarly, the law enforcement option provides an opportunity to study other generally accepted subjects included in a two-year law enforcement services program such as criminal behavior, criminal investigation, patrol operation, traffic management, and other aspects of law enforcement administration and operations. The security services option provides an opportunity to study other generally accepted subjects related to a two-year security services program such as accident prevention and safety management, common carrier protection, fire prevention, private security, industrial security, retail security, security systems and surveillance.

Job opportunities are available with federal, state, county and municipal governments. In addition, knowledge, skills and attitudes acquired in this course of study qualify one for job opportunities with private enterprise in such areas as industrial, retail, and private security.

CRIMINAL JUSTICE - PROTECTIVE SERVICE TECHNOLOGY

		HOURS PER WEEK			
		Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER					
CJC 101	Introduction to Criminal Justice	3	0	0	3
CJC 104	Patrol Procedure and Traffic Law Enforcement	3	0	0	3
ENG 101	Grammar	3	0	0	3
MAT 121	Technical Mathematics	5	0	0	5
SOC 102	Principles of Sociology	3	0	0	3
		17	0	0	17
SECOND QUARTER					
BUS 102	Typewriting	2	0	3	3
CJC 103	Introduction to Criminal Investigation	3	0	0	3
CJC 115	Criminal Law	5	0	0	5
ENG 102	Composition	3	0	0	3
SOC 206	American Institutions	3	0	0	3
		16	0	3	17
THIRD QUARTER					
CJC 118	Defensive Tactics	1	0	3	2
CJC 141	Handwriting Identification	5	0	0	5
CJC 210	Criminal Investigation	3	0	0	3
ENG 103	Report Writing	3	0	0	3
PSY 217	Introduction to Psychology	3	0	0	3
		15	0	3	16
FOURTH QUARTER					
CJC 102	Introduction to Criminology	3	0	0	3
CJC 203	Forensic Photography	2	0	3	3
CJC 240	Firearms Identification	5	0	0	5
EDP 201	BASIC Language Programming I	2	0	3	3
ENG 204	Oral Communication	3	0	0	3
		15	0	6	17
FIFTH QUARTER					
CHM 101	Introduction to Chemistry	4	2	0	5
CJC 105	Firearms	2	0	3	3
CJC 140	Fingerprint Identification	5	0	0	5
EDP 210	BASIC Language Programming II	2	0	3	3
___ ___	Elective	3	0	0	3
		16	2	6	19
SIXTH QUARTER					
BIO 103	Anatomy and Physiology	3	2	0	4
CJC 211	Introduction to Criminalistics	5	0	0	5
CJC 224	Industrial Security	3	0	0	3
PHY 225	Forensic Physics	3	2	0	4
		14	4	0	16

SEVENTH QUARTER					
CJC 220	Law Enforcement Organization and Management	3	0	0	3
CJC 222	Crime Scene Investigation	3	0	0	3
LEG 205	Constitutional Law	5	0	0	5
___ ___	Criminal Justice Elective	3	0	0	3
___ ___	Elective	3	0	0	3
		17	0	0	17
CRIMINAL JUSTICE ELECTIVES					
CJC 205	Scientific Evidence	3	0	0	3
CJC 208	Arson Investigation	3	0	0	3
CJC 230	Contemporary Issues in Criminal Justice	3	0	0	3
PLS 103	State and Local Government	3	0	0	3

See pages 63 to 106 for course descriptions.

ELECTRONICS ENGINEERING TECHNOLOGY

The Electronics Technology curriculum provides a basic background in electronic related theory, with practical applications of electronics for business and industry. Courses are designed to develop competent electronics technicians who may work as assistants to engineers or as liaisons between engineers and skilled craftspersons.

The electronics technician will start in one or more of the following areas: research, design, development, production, maintenance, or sales. The graduate may begin as an electronics technician, engineering aide, laboratory technician, supervisor, or equipment specialist.

Prerequisites: In addition to general admissions requirements, at least one year of high school algebra or the equivalent is required.

		HOURS PER WEEK			
		Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER					
ELC 107	Electricity I	3	0	6	5
ELN 102	Electronic Fabrication Techniques	0	2	0	1
ELN 106	Electronics I	2	0	6	4
ENG 101	Grammar	3	0	0	3
MAT 121	Technical Mathematics	5	0	0	5
		13	2	12	18
SECOND QUARTER					
ELC 108	Electricity II	3	0	6	5
ELN 107	Electronics II	3	0	6	5
ENG 102	Composition	3	0	0	3
MAT 122	Technical Mathematics	5	0	0	5
		14	0	12	18

THIRD QUARTER				
ELC 109 Electricity III	3	0	6	5
ELN 108 Electronics III	3	0	6	5
MAT 123 Technical Mathematics	5	0	0	5
PHY 101 Physics: Properties of Matter	3	2	0	4
	14	2	12	19
FOURTH QUARTER				
DFT 100 Technical Drafting	1	0	3	2
ELN 109 Electronics IV	3	0	6	5
ELN 110 Introduction to Digital Electronics	3	0	6	5
ENG 103 Report Writing	3	0	0	3
PHY 102 Physics: Work, Energy, and Power	3	2	0	4
	13	2	15	19
FIFTH QUARTER				
EDP 201 BASIC Language Programming I	2	0	3	3
ELN 202 Communication Electronics	3	0	6	5
ELN 232 Electronic Projects, Basic Wiring	0	0	3	1
ELN 236 Industrial Field Trips	0	0	3	1
ELN 241 Digital Principles and Applications	2	0	3	3
PSY 217 Introduction to Psychology	3	0	0	3
___ ___ Elective	3	0	0	3
	13	0	18	19
SIXTH QUARTER				
ELN 233 Analytic Electronic Troubleshooting	0	0	6	2
ELN 238 Antenna and Transmission Line Theory	2	0	3	3
ELN 253 Electronics in Industry	2	0	6	4
ENG 204 Oral Communication	3	0	0	3
SOC 102 Principles of Sociology	3	0	0	3
	10	0	15	15
SEVENTH QUARTER				
ELN 220 Electronic Systems	3	0	3	4
ELN 234 Electronic System Design and Construction	0	0	6	2
ELN 254 Microprocessors, Servocontrols, and Robotics	2	0	6	4
PHY 104 Physics: Light and Sound	3	2	0	4
SOC 206 American Institutions	3	0	0	3
___ ___ Elective	3	0	0	3
	14	2	15	20

See pages 63 to 106 for course descriptions.

GENERAL EDUCATION

The General Education program is school for those students who desire a basic exposure to the areas of English, literature, fine arts and philosophy, social science, and science and mathematics and who would like to tailor their educational goals to personal interests rather than to specific professional requirements.

The General Education program offers three alternatives for students: first, is the pursuit of an Associate in General Education degree (a two-year degree), which will take approximately six quarters; second, is the opportunity to transfer to either a four-year college or to a university to pursue a baccalaureate degree; and third, to provide academic enrichment.

Also, adults who want to explore a subject for their own enrichment and pleasure may enroll as special students (those who are not seeking a degree). Such students may elect to take as little as one course each quarter. Classes may be scheduled during the day and evening so that employed persons may attend. Each General Education program student will be offered special assistance in planning an education program and in relating the program to his/her personal goals.

General Education Requirements
A student is eligible to receive the Associate in Arts degree in General Education upon completing the required 96 quarter hours credit.

A student must complete all courses that are marked with an asterisk and take the minimum number from other areas as outlined below. Required core courses must equal at least 54 quarter hours.

Beyond the core requirements, the student is free to select 42 quarter hours from the General Education listing to complete the 96 quarter hours for graduation.

Creative Arts
A minimum of 5 hours must be selected from the following areas: art, drama, creative writing, or music.

Humanities
A minimum of 15 hours must be selected from at least two areas. This requirement is met by a sequence in language or some combination of courses in the following areas: English, literature, history, philosophy, or speech.

Natural Science and Mathematics
A minimum of 12 hours must be chosen from at least two areas, including one laboratory science course. The student may choose biology, physics, chemistry, geology, physical geography, and/or mathematics.

Social and Behavioral Sciences
A minimum of 5 hours must be selected from the following areas: anthroplogy, economics, political science, psychology, sociology, and geography.

GENERAL EDUCATION

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
CREATIVE ARTS				
ART 201 Art History and Appreciation	5	0	0	5
ART 241 Beginning Painting	2	6	0	5
MUS 115 Survey of Music Literature	5	0	0	5
MUSIC [illegible]	5	[illegible]	[illegible]	[illegible]
PHYSICAL EDUCATION				
* PED 101 Foundations of Physical Activity	2	2	0	3
HUMANITIES				
* ENG 101 Grammar	3	0	0	3
* ENG 102 Composition	3	0	0	3
* ENG 103 Report Writing	3	0	0	3
ENG 104 Reading and Composition	3	0	0	3
ENG 204 Oral Communication	3	0	0	3
ENG 207 Poetry Writing	5	0	0	5
HIS 101 Western Civilization I	5	0	0	5
HIS 102 Western Civilization II	5	0	0	5
P&R 103 Introduction to Religion	5	0	0	5
PLS 101 American National Government	5	0	0	5
NATURAL SCIENCE AND MATHEMATICS				
BIO 101 Human Anatomy and Physiology I	4	2	0	5
BIO 107 Human Anatomy and Physiology II	4	2	0	5
BUS 120 Accounting I	5	2	0	6
BUS 121 Accounting II	5	2	0	6
CHM 101 Introduction to Chemistry	4	2	0	5
CHM 114 Basic Chemical Concepts I	5	0	6	7
CHM 115 Basic Chemical Concepts II	5	0	6	7
CHM 118 Basic Chemistry	2	2	0	3
EDP 104 Data Processing Theory	3	0	0	3
GEO 101 Marine Geology	3	2	0	4
GEO 102 Geology of the Oceans	4	0	0	4
GGY 135 Introduction to Physical Geography	4	4	0	6
* MAT 121 Technical Mathematics	5	0	0	5
MAT 122 Technical Mathematics	5	0	0	5
MAT 123 Technical Mathematics	5	0	0	5
MAT 201 Technical Mathematics	5	0	0	5
MAT 202 Technical Mathematics	5	0	0	5
PHY 101 Physics: Properties of Matter	3	2	0	4
PHY 102 Physics: Work, Energy, and Power	3	2	0	4
PHY 103 Physics: Electricity	3	2	0	4
PHY 104 Physics: Light and Sound	3	2	0	4
PHY 105 Physics: Heat and Fluids	3	2	0	4
MAT [illegible]	5	0	0	5

SOCIAL AND BEHAVIORAL SCIENCES					
ANT 105	Introduction to Anthropology	5	0	0	5
CJC 101	Introduction to Criminal Justice	3	0	0	3
ECO 102	Economics I	3	0	0	3
ECO 104	Economics II	3	0	0	3
ECO 108	Consumer Economics	3	0	0	3
EDU 205	Teaching Methods	1	2	0	2
POL 103	State and Local Government	3	0	0	3
PSY 217	Introduction to Psychology	3	0	0	3
SOC 102	Principles of Sociology	3	0	0	3
SOC 206	American Institutions	3	0	0	3
SOC 212	Sociology of Deviant Behavior	3	0	0	3
SOC 217	Juvenile Delinquency	3	0	0	3
SOC 219	Family in Society	3	0	0	3

*** REQUIRED BY ALL STUDENTS AS PART OF THE CORE CURRICULUM FOR THE GENERAL EDUCATION DEGREE.**

See pages 63 to 106 for course descriptions.

NOTE: Requirements for the different pre-professional areas will vary; therefore, it is the responsibility of the student to check the catalog of the senior institution to which the student wishes to transfer. High school background, scholastic aptitude, and vocational goals also will be considered as factors shaping the individual's program of study. Counselors and faculty members are available to assist the student in course selection. (This is a sample program and is not meant to be prescriptive for any particular individual.)

FIRST QUARTER		
ENG 101	Grammar	3
MAT 121	Technical Mathematics	5
____ ____	Laboratory Science	6
____ ____	Social and Behavioral Sciences Elective	2 to 5

SECOND QUARTER		
ENG 102	Composition	3
HIS 101	Western Civilization I	5
MAT 122	Technical Mathematics	5
____ ____	Natural Science and Mathematics Elective	3 to 5

THIRD QUARTER		
ART 241	Beginning Painting	5
ENG 103	Report Writing	3
HIS 102	Western Civilization II	5
MUS 115	Survey of Music Literature	5

FOURTH QUARTER		
ENG 204	Oral Communication	3
PED 101	Foundations of Physical Activity	3
____ ____	Electives	3 to 12

FIFTH QUARTER

____ ____	Humanities Elective	3 to 5
____ ____	Social and Behavioral Sciences Elective	2 to 5
____ ____	Electives	2 to 8

SIXTH QUARTER

____ ____	Humanities Elective (if needed)	3 to 5
____ ____	Electives to bring total hours to 96	

GENERAL OCCUPATIONAL TECHNOLOGY

The General Occupational Technology curriculum is designed to meet the needs of full-time and/or part-time employees in business and industry. This program of study provides these individuals with an opportunity to upgrade their skills and/or to earn an associate degree by taking courses suited to their occupational needs. The curriculum consists of a basic core of courses in communication, mathematics, and social science. The balance of the curriculum consists of a sequence of technical courses individually tailored to satisfy the requirements of the student and/or the student's employer.

To graduate with an Associate of Applied Science degree in General Occupational Technology, a student must complete eighteen (18) quarter hours of general courses, thirty-one (31) quarter hours of related courses, and sixty (60) quarter hours of major technical courses for a total of 109 quarter hours credit from the following listings:

GENERAL

Students are required to complete eighteen (18) quarter hours from the following courses: English, social science, and/or humanities.

		HOURS PER WEEK			
		Class	Lab	Manipulative Lab	Quarter Hours Credit
ENG 101	Grammar	3	0	0	3
ENG 102	Composition	3	0	0	3
ENG 103	Report Writing	3	0	0	3
ENG 104	Reading and Composition	3	0	0	3
ENG 105	Grammar and Composition	3	2	0	4
ENG 106	Grammar and Composition	3	2	0	4
ENG 204	Oral Communication	3	0	0	3
ENG 206	Business Communications	3	0	0	3
PSY 211	Stress Management	3	0	0	3
PSY 217	Introduction to Psychology	3	0	0	3
SOC 102	Principles of Sociology	3	0	0	3

SOC	206	American Institutions	3	0	0	3
SOC	212	Sociology of Deviant Behavior	3	0	0	3
SOC	219	The Family in Society	3	0	0	3

RELATED

From the list below, students are to select thirty-one (31) quarter hours from courses supporting and enriching the foundation of technical courses.

			HOURS PER WEEK			
					Manipulative Lab	Quarter Hours Credit
			Class	Lab		
BIO	103	Anatomy and Physiology	3	2	0	4
BUS	100	Typewriting	0	0	3	1
BUS	126	Personal Finance	3	0	0	3
BUS	183	Terminology and Vocabulary	3	0	0	3
BUS	213	Office Procedures	1	2	0	2
BUS	272	Principles of Supervision	3	0	0	3
DFT	100	Technical Drafting	1	0	3	2
DFT	104	Blueprint Reading: Mechanical	3	0	0	3
DFT	117	Drafting and Blueprint Reading	3	0	3	4
ECO	102	Economics I	3	0	0	3
ECO	104	Economics II	3	0	0	3
ECO	108	Consumer Economics	3	0	0	3
EDP	100	Computer Literacy	3	2	0	4
EDP	101	Computer Familiarization	1	0	0	1
EDP	104	Data Processing Theory	3	0	0	3
EDP	201	BASIC Language Programming I	2	0	3	3
EDP	210	BASIC Language Programming II	2	0	3	3
EDP	250	BASIC Business Programming	2	2	0	3
MAT	110	Business Mathematics	5	0	0	5
MAT	121	Technical Mathematics	5	0	0	5
MAT	122	Technical Mathematics	5	0	0	5
MAT	123	Technical Mathematics	5	0	0	5
MAT	130	Advanced Business Mathematics	5	0	0	5
MAT	211	Basic Statistics	5	0	0	5
MEC	121	Industrial Methods I	0	0	3	1
MEC	122	Industrial Methods II	0	0	3	1
MEC	123	Industrial Methods III	0	0	3	1
MEC	205	Strength of Materials	3	2	0	4
MEC	215	Metallurgy	3	2	0	4
MGT	104	The Art of Motivating People	2	0	0	2
MGT	105	Human Relations and Communications	2	0	0	2
PHO	110	Introduction to Photography	1	0	3	2
PHO	120	Photography	2	2	0	3
PHO	200	Intermediate Photography	1	0	3	2
PHO	210	Advanced Photography	1	0	3	2
PHY	100	Introductory Physics	4	2	0	5
PHY	101	Physics: Properties of Matter	3	2	0	4

PHY	102	Physics: Work, Energy, and Power	3	2	0	4
PHY	103	Physics: Electricity	3	2	0	4
PHY	104	Physics: Light and Sound	3	2	0	4
PHY	105	Physics: Heat and Fluids	3	2	0	4
PHY	106	Applied Mechanics	3	2	0	4
PHY	225	Forensic Physics	3	2	0	4

MAJOR

Major courses are individually tailored to satisfy the requirements of the students and/or the student's employer. Students are to take sixty (60) quarter hours from the following list of major courses:

			HOURS PER WEEK			
			Class	Lab	Manipulative Lab	Quarter Hours Credit
BIO	101	Human Anatomy and Physiology I	4	2	0	5
BIO	107	Human Anatomy and Physiology II	4	2	0	5
BIO	113	Environmental Measurements	1	0	3	2
BIO	115	Medical Terminology and Vocabulary I	3	0	0	3
BIO	116	Medical Terminology and Vocabulary II	3	0	0	3
BIO	117	Medical Terminology and Vocabulary III	3	0	0	3
BIO	129	Marine Animals of North Carolina	4	0	0	4
BIO	131	Marine Biology	2	0	3	3
BIO	132	Marine Invertebrate Zoology	2	0	3	3
BIO	201	Aquarium Systems	1	2	0	2
BIO	213	Marine Vertebrate Zoology	3	2	0	4
BUS	101	Introduction to Business	5	0	0	5
BUS	102	Typewriting I	2	0	3	3
BUS	103	Typewriting II	2	0	3	3
BUS	104	Typewriting III	2	0	3	3
BUS	106	Shorthand I	3	2	0	4
BUS	107	Shorthand II	3	2	0	4
BUS	108	Shorthand III	3	2	0	4
BUS	110	Speedwriting and Transcription I	3	2	0	4
BUS	111	Speedwriting and Transcription II	3	2	0	4
BUS	112	Filing	3	0	0	3
BUS	115	Business Law I	5	0	0	5
BUS	116	Business Law II	5	0	0	5
BUS	120	Accounting I	5	2	0	6
BUS	121	Accounting II	5	2	0	6
BUS	122	Accounting III	5	2	0	6
BUS	123	Business Finance I	3	2	0	4
BUS	124	Business Finance II	3	2	0	4
BUS	125	Accounting IV	5	2	0	6
BUS	128	Computerized Accounting - Electronic Spreadsheet	1	2	0	2
BUS	205	Advanced Typewriting I	2	0	3	3
BUS	206	Dictation and Transcription I	3	2	0	4
BUS	207	Dictation and Transcription II	3	2	0	4
BUS	209	Advanced Typewriting II	2	0	3	3

		HOURS PER WEEK			
		Class	Lab	Manipulative Lab	Quarter Hours Credit
BUS	222 Word Processing	2	0	3	3
BUS	229 Taxes I	3	2	0	4
BUS	230 Taxes II	3	2	0	4
BUS	232 Sales Development	3	0	0	3
BUS	235 Business Management	3	2	0	4
BUS	239 Marketing	5	0	0	5
CAD	242 Computer Graphics	3	2	0	4
CHM	101 Introduction to Chemistry	4	2	0	5
CHM	109 Water Analysis I	1	0	3	2
CHM	114 Basic Chemical Concepts I	5	0	6	7
CHM	115 Basic Chemical Concepts II	5	0	6	7
CHM	116 Descriptive Chemistry	4	0	6	5
CHM	117 Unit Processes	1	0	18	7
CHM	118 Basic Chemistry	2	2	0	3
CHM	150 Industrial Operations	5	0	0	5
CHM	224 Water Analysis II	2	2	0	3
CHM	230 Organic Chemistry I	3	0	0	3
CHM	231 Organic Chemistry II	3	0	6	5
CHM	232 Organic Chemistry III	3	0	6	5
CHM	243 Industrial Analysis I (Quantitative)	1	0	9	4
CHM	244 Industrial Analysis II (Quantitative)	1	0	9	4
CHM	245 Industrial Analysis III (Quantitative)	3	0	9	6
CIV	103 Surveying for Construction Trades	4	4	0	6
CJC	101 Introduction to Criminal Justice	3	0	0	3
CJC	102 Introduction to Criminology	3	0	0	3
CJC	103 Introduction to Criminal Investigation	3	0	0	3
CJC	104 Patrol Procedure and Traffic Law Enforcement	3	0	0	3
CJC	105 Firearms	2	0	3	3
CJC	115 Criminal Law	5	0	0	5
CJC	118 Defensive Tactics	1	0	3	2
CJC	140 Fingerprint Identification	5	0	0	5
CJC	141 Handwriting Identification	5	0	0	5
CJC	203 Forensic Photography	2	0	3	3
CJC	210 Criminal Investigation	3	0	0	3
CJC	211 Introduction to Criminalistics	5	0	0	5
CJC	220 Law Enforcement Organization and Management	3	0	0	3
CJC	222 Crime Scene Investigation	3	0	0	3
CJC	240 Firearms Identification	5	0	0	5
CON	101 Construction Estimating	3	0	3	4
DFT	101 Technical Drafting	3	0	9	6
DFT	102 Technical Drafting	3	0	9	6
DFT	103 Technical Drafting	3	0	9	6
DFT	105 Pipe Drafting I	2	2	0	3
DFT	114 Pipe Drafting II	3	0	0	3
DFT	201 Technical Drafting and Computer Graphics	7	0	6	9
DFT	202 Technical Drafting and Computer Graphics	6	0	9	9
DFT	203 Design Drafting and Computer Graphics	6	0	9	9

		HOURS PER WEEK			
		Class	Lab	Manipulative Lab	Quarter Hours Credit
DFT 208	Introduction to Architectural Drafting	3	0	9	6
DMK 163	Fundamentals of Real Estate	6	0	0	6
DMK 164	Real Estate Law	3	0	0	3
DMK 209	Real Estate Finance	3	0	0	3
DMK 271	Real Estate Brokerage Operations	3	0	0	3
DMK 292	Real Estate Appraisal	3	0	0	3
DMK 296	Property Management	3	0	0	3
EDP 202	FORTRAN Language Programming I	2	0	3	3
EDP 203	FORTRAN 77	2	4	0	4
EDP 211	Extended BASIC Language Programming	2	0	3	3
EDP 220	COBOL I	2	4	0	4
EDP 221	COBOL II	2	4	0	4
EDP 222	COBOL III	2	4	0	4
EDP 224	RPG II	2	4	0	4
EDP 225	Advanced RPG	2	4	0	4
EDP 230	PASCAL	2	4	0	4
EDU 205	Teaching Methods	1	2	0	2
EDU 231	Creative Activities	3	0	0	3
EDU 233	Nutrition	3	0	0	3
ELC 100	Electricity I	2	0	3	3
ELC 101	Electricity II	2	0	3	3
ELC 107	Electricity I	3	0	6	5
ELC 108	Electricity II	3	0	6	5
ELC 109	Electricity III	3	0	6	5
ELN 102	Electronic Fabrication Techniques	0	2	0	1
ELN 106	Electronics I	2	0	6	4
ELN 107	Electronics II	3	0	6	5
ELN 108	Electronics III	3	0	6	5
ELN 109	Electronics IV	3	0	6	5
ELN 110	Introduction to Digital Electronics	3	0	6	5
ELN 140	Introduction to Marine Electronics	4	2	0	5
ELN 202	Communication Electronics	3	0	6	5
ELN 210	Electronics	2	2	0	3
ELN 220	Electronic Systems	3	0	3	4
ELN 224	Measurement and Control I	2	0	9	5
ELN 225	Measurement and Control II	2	0	9	5
ELN 226	Measurement and Control III	2	0	9	5
ELN 232	Electronic Projects, Basic Wiring	0	0	3	1
ELN 233	Analytic Electronic Troubleshooting	0	0	6	2
ELN 234	Electronic System Design and Construction	0	0	6	2
ELN 238	Antenna and Transmission Line Theory	2	0	3	3
ELN 240	Computer Project (Digital)	0	0	6	2
ELN 241	Digital Principles and Applications	2	0	3	3
ELN 243	Computer Electronics	0	0	6	2
ELN 244	Computer Project (Microprocessor)	1	0	3	2
ELN 245	Peripheral Devices	1	0	6	3
ELN 247	Computer Project (Microcomputer)	0	0	3	1

		HOURS PER WEEK			
		Class	Lab	Manipulative Lab	Quarter Hours Credit
ELN 249	Computer Interfacing	0	0	3	1
ELN 250	Introduction to Microprocessors	0	0	3	1
ELN 251	Microprocessors I	2	0	6	4
ELN 252	Microprocessors II	2	0	6	4
ELN 253	Electronics in Industry	2	0	6	4
ELN 254	Microprocessors,Servocontrols, and Robotics	2	0	6	4
ELN 255	Computer Systems	3	0	3	4
FST 106	Nuclear Radiation Monitoring	3	0	0	3
GEO 101	Marine Geology	3	2	0	4
GEO 102	Geology of the Oceans	4	0	0	4
HEA 109	Medical Ethics, Law, and Economics	3	0	0	3
HEA 110	Clinical Practice	3	0	0	3
HED 120	First Aid	2	0	0	2
HED 121	First Aid and Marine Safety	3	0	0	3
INS 215	Life and Health Insurance	4	0	0	4
INS 216	Property and Casualty Insurance	4	0	0	4
ISC 113	Industrial Safety	2	0	0	2
LEG 101	Introduction to Paralegalism	3	0	0	3
LEG 111	Legal Writing	3	0	0	3
LEG 113	Family Law	3	0	0	3
LEG 115	Commercial Law I	5	0	0	5
LEG 116	Commercial Law II	5	0	0	5
LEG 117	Torts and Litigation Preparation	3	0	0	3
LEG 132	Legal Research/Bibliography	4	6	0	7
LEG 135	Legal Systems	5	0	0	5
LEG 205	Constitutional Law	5	0	0	5
LEG 208	Administrative Law	3	0	0	3
LEG 214	Property I	3	0	0	3
LEG 215	Property II Title Search	3	2	0	4
LEG 216	Property III Loan Closings	1	2	0	2
LEG 217	Elements of Criminal Law and Procedure	5	0	0	5
LEG 219	Computerized Legal Research	3	0	0	3
LEG 224	Wills	3	2	0	4
LEG 230	Bankruptcy and Collection	3	0	0	3
LEG 291	Paralegal Office Procedures	3	0	0	3
MEC 100	Special Project	0	0	3	1
MEC 101	Special Project	0	0	3	1
MEC 102	Special Project	0	0	3	1
MEC 111	Industrial Mechanics I	5	2	0	6
MEC 112	Industrial Mechanics II	3	2	0	4
MEC 115	Industrial Pipefitting I	1	2	0	2
MEC 116	Industrial Pipefitting II	4	2	0	5
MEC 118	Introduction to Manufacturing Engineering	4	0	0	4
MEC 209	Introduction to Metallurgy	3	2	0	4
MEC 216	Industrial Materials	5	0	0	5
MEC 235	Hydraulics and Pneumatics	3	0	3	4
MEC 240	Radiographic Testing	4	0	0	4

		HOURS PER WEEK			
		Class	Lab	Manipulative Lab	Quarter Hours Credit
MEC 246	NDT Surface Testing, Magnetic Particle, and Liquid Penetrant	4	0	0	4
MEC 248	Ultrasonic Testing	4	0	0	4
MET 101	Introduction to Meteorology	3	0	0	3
MSC 101	Navigation I	2	2	0	3
MSC 102	Navigation II	2	2	0	3
MSC 108	Oceanographic Instrumentation	2	0	3	3
MSC 109	Oceanography I	3	0	0	3
MSC 110	Oceanography II	3	0	0	3
MSC 111	Net Construction Methods	1	0	3	2
MSC 112	Biological Net Construction I	1	0	3	2
MSC 113	Biological Net Construction II	1	0	3	2
MSC 114	Biological Sampling Methods	0	4	0	2
MSC 115	Construction of Gill Nets	1	0	3	2
MSC 117	Practical Experience I	0	0	3	1
MSC 118	Practical Experience II	0	0	3	1
MSC 119	Practical Experience III	0	0	3	1
MSC 132	Power Boat Operations and Seamanship	1	0	3	2
MSC 202	Data Processing I	1	0	3	2
MSC 206	Estuarine Survey	2	4	3	5
MSC 205	Data Processing II	1	0	3	2
MSC 218	Eddy Current Testing	2	0	0	2
PME 101	Marine Engines I	1	0	3	2
PME 102	Marine Engines II	1	0	3	2
PME 105	Outboard Motor Repair	1	0	3	2
PME 111	Emission Systems Diagnosis	2	2	0	3
PME 112	Marine Diesel and Gasoline Engines	2	2	0	3
WLD 134	Marine Welding	1	0	3	2

See pages 63 to 106 for course descriptions.

GENERAL OFFICE

The purposes of the General Office curriculum are to prepare the individual to enter clerical-office occupations, provide an educational program for individuals wanting education for upgrading (moving from one position to another) or retraining (moving from present position to a clerical position), and provide an opportunity for individuals wanting to fulfill professional or general interest needs.

The purpose will be fulfilled through skill development in the areas of typewriting, filing and business machines. Through these skills and through development of personal competencies and qualities, the individual will be able to function effectively in office-related activities.

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER				
BUS 102 Typewriting I	2	0	3	3
~~EDP 104 Data Processing Theory~~	~~3~~	~~0~~	~~0~~	~~3~~
ENG 105 Grammar and Composition	3	2	0	4
MAT 110 Business Mathematics	5	0	0	5
PSY 217 Introduction to Psychology	3	0	0	3
	16	2	3	18
SECOND QUARTER				
BUS 103 Typewriting II	2	0	3	3
BUS 120 Accounting I	5	2	0	6
ENG 106 Grammar and Composition	3	2	0	4
MAT 130 Advanced Business Mathematics	5	0	0	5
SOC 102 Principles of Sociology	3	0	0	3
	18	4	3	21
THIRD QUARTER				
BUS 104 Typewriting III	2	0	3	3
BUS 121 Accounting II	5	2	0	6
BUS 128 Computerized Accounting - Electronic Spreadsheet	1	2	0	2
BUS 183 Terminology and Vocabulary	3	0	0	3
ENG 104 Reading and Composition	3	0	0	3
	14	4	3	17
FOURTH QUARTER				
BUS 122 Accounting III	5	2	0	6
BUS 205 Advanced Typewriting I	2	0	3	3
BUS 229 Taxes I	3	2	0	4
ECO 102 Economics I	3	0	0	3
	13	4	3	16
FIFTH QUARTER				
BUS 239 Marketing	5	0	0	5
ECO 104 Economics I	3	0	0	3
EDP 250 BASIC Business Programming	2	2	0	3
ENG 204 Oral Communication	3	0	0	3
___ ___ Elective	3	0	0	3
___ ___ Elective	3	0	0	3
	19	2	0	20
SIXTH QUARTER				
BUS 112 Filing	3	0	0	3
BUS 213 Office Procedures	1	2	0	2
BUS 222 Word Processing	2	0	3	3
BUS 232 Sales Development	3	0	0	3
BUS 235 Business Management	3	2	0	4
SOC 206 American Institutions	3	0	0	3
	15	4	3	18

See pages 63 to 106 for course descriptions.

INSTRUMENTATION TECHNOLOGY

The Instrumentation Technology curriculum provides a program of study to develop knowledge of measuring and controlling devices and to develop the technical skills involved in the application of instrument control to processes, systems, and operations of modern industry. The instrumentation technician is a key person in keeping a processing plant operating. This individual is responsible for both production and production control and must deal with variables that affect manufacturing processes such as temperature, flow, level, humidity, density and viscosity that affect manufacturing processes. In many plants when a piece of equipment breaks down, employees are laid off until the instrumentation person can repair the equipment and production is resumed. This person's knowledge of mechanics, electronics, pneumatics and the manufacturing processes is the key factor in how quickly a machine or plant may again resume operation.

The instrumentation technician may select, install, calibrate, check out and maintain sensing, telemetering, and recording instrumentation and circuitry. Other functions may include devising, setting up and operating instrumentation equipment involved in testing mechanical, structural or electrical equipment. The graduate may work as an instrumentation technician, engineering aide or associate, service specialist, laboratory technician or instrument field service technician.

Prerequisites: In addition to general admission requirements, at least one year of high school algebra or the equivalent is required.

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER				
ELC 107 Electricity I	3	0	6	5
ELN 102 Electronic Fabrication Techniques	0	2	0	1
ELN 106 Electronics I	2	0	6	4
ENG 101 Grammar	3	0	0	3
MAT 121 Technical Mathematics	5	0	0	5
	13	2	12	18
SECOND QUARTER				
ELC 108 Electricity II	3	0	6	5
ELN 107 Electronics II	3	0	6	5
ENG 102 Composition	3	0	0	3
MAT 122 Technical Mathematics	5	0	0	5
	14	0	12	18

THIRD QUARTER				
ELC 109 Electricity III	3	0	6	5
ELN 108 Electronics III	3	0	6	5
MAT 123 Technical Mathematics	5	0	0	5
PHY 101 Physics: Properties of Matter	3	2	0	4
	14	2	12	19
FOURTH QUARTER				
DFT 100 Technical Drafting	1	0	3	2
ELN 109 Electronics IV	3	0	6	5
ELN 110 Introduction to Digital Electronics	3	0	6	5
ENG 103 Report Writing	3	0	0	3
PHY 102 Physics: Work, Energy, and Power	3	2	0	4
	13	2	15	19
FIFTH QUARTER				
ELN 224 Measurement and Control I	2	0	9	5
ELN 236 Industrial Field Trips	0	0	3	1
ELN 241 Digital Principles and Applications	2	0	3	3
PHY 105 Physics: Heat and Fluids	3	2	0	4
PSY 217 Introduction to Psychology	3	0	0	3
___ ___ Elective	3	0	0	3
	13	2	15	19
SIXTH QUARTER				
ELN 225 Measurement and Control II	2	0	9	5
ELN 251 Microprocessors I	2	0	6	4
PHY 104 Physics: Light and Sound	3	2	0	4
SOC 102 Principles of Sociology	3	0	0	3
	10	2	15	16
SEVENTH QUARTER				
ELN 226 Measurement and Control III	2	0	9	5
ELN 252 Microprocessors II	2	0	6	4
ENG 204 Oral Communication	3	0	0	3
SOC 206 American Institutions	3	0	0	3
___ ___ Elective	3	0	0	3
	13	0	15	18

See pages 63 to 106 for course descriptions.

MARINE TECHNOLOGY

The Marine Technology curriculum is designed to provide the science, English, mathematics, and practical skills essential for success in the field of marine science support. This curriculum provides the student with the opportunity to become proficient in the knowledge and skills of the scientific support technician by practical training aboard ship as well as in the classroom. Marine Technology curriculum prepares individuals to use and maintain new and sophisticated instruments such as electronic navigation devices, precision positioning systems,

acoustical releases, and data acquisition and reduction systems aboard ocean-going and other types of vessels.

Graduates of this program will be basically qualified to work in the following areas: data acquisition and reduction, environmental monitoring, geophysical exploration, general oceanography, field and laboratory biology, marine chemical analysis, water and wastewater treatment laboratory analysis, nuclear power plant technology, fishing gear construction and repair, vessel maintenance and repair, offshore oil drilling, fishing, marine salvage, and other marine scientific activities. Employment opportunities are available with various state and federal agencies and with private businesses and industry associated with marine operation and research.

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER				
BIO 131 Marine Biology	2	0	3	3
BUS 100 Typewriting	0	0	3	1
HED 121 First Aid and Marine Safety	3	0	0	3
MAT 121 Technical Mathematics	5	0	0	5
MSC 109 Oceanography I	3	0	0	3
MSC 111 Net Construction Methods	1	0	3	2
MSC 132 Power Boat Operations and Seamanship	1	0	3	2
SHI 101 Ocean Survey	(44-88 Clock Hours)			2
				21
SECOND QUARTER				
BIO 132 Marine Invertebrate Zoology	2	0	3	3
ENG 101 Grammar	3	0	0	3
MSC 101 Navigation I	2	2	0	3
MSC 110 Oceanography II	3	0	0	3
MSC 117 Practical Experience I	0	0	3	1
MSC 141 Marine Projects	(33 Clock Hours)			1
PHO 110 Introduction to Photography	1	0	3	2
___ ___ Elective	3	0	0	3
				19
THIRD QUARTER				
BIO 201 Aquarium Systems	1	2	0	2
CHM 101 Introduction to Chemistry	4	2	0	5
ENG 102 Composition	3	0	0	3
MAT 122 Technical Mathematics	5	0	0	5
MSC 102 Navigation II	2	2	0	3
MSC 118 Practical Experience II	0	0	3	1
SHI 102 Ocean Survey	(44-88 Clock Hours)			2
WLD 134 Marine Welding	1	0	3	2
				23

FOURTH QUARTER					
MAT 123	Technical Mathematics	5	0	0	5
MSC 108	Oceanographic Instrumentation	2	0	3	3
MSC 112	Biological Net Construction I	1	0	3	2
MSC 142	Marine Projects	(33 Clock Hours)			1
PHY 101	Physics: Properties of Matter	3	2	0	4
PME 101	Marine Engines I	1	0	3	2
PSY 217	Introduction to Psychology	3	0	0	3
					20
FIFTH QUARTER					
BIO 113	Environmental Measurements	1	0	3	2
CHM 109	Water Analysis I	1	0	3	2
EDP 201	BASIC Language Programming I	2	0	3	3
ENG 103	Report Writing	3	0	0	3
MSC 113	Biological Net Construction II	1	0	3	2
PME 102	Marine Engines II	1	0	3	2
SHI 103	Ocean Survey	(44-88 Clock Hours)			2
SOC 102	Principles of Sociology	3	0	0	3
					19
SIXTH QUARTER					
CHM 224	Water Analysis II	2	2	0	3
ENG 204	Oral Communication	3	0	0	3
GEO 101	Marine Geology	3	2	0	4
MAT 211	Basic Statistics	5	0	0	5
MSC 202	Data Processing I	1	0	3	2
MSC 143	Marine Projects	(33 Clock Hours)			1
PHY 102	Physics: Work, Energy, and Power	3	2	0	4
					22
SEVENTH QUARTER					
BIO 213	Marine Vertebrate Zoology	3	2	0	4
DFT 117	Drafting and Blueprint Reading	3	0	3	4
ELC 100	Electricity I	2	0	3	3
MSC 119	Practical Experience III	0	0	3	1
MSC 205	Data Processing II	1	0	3	2
SHI 104	Ocean Survey	(44-88 Clock Hours)			2
SOC 206	American Institutions	3	0	0	3
					19
EIGHTH QUARTER					
ELC 101	Electricity II	2	0	3	3
ELN 140	Introduction to Marine Electronics	4	2	0	5
MSC 114	Biological Sampling Methods	0	4	0	2
MSC 206	Estuarine Survey	2	4	3	5
SHI 105	Ocean Survey	(44-88 Clock Hours)			2
___ ___	Elective	3	0	0	3
					20

See pages 63 to 106 for course descriptions.

MECHANICAL DRAFTING AND DESIGN TECHNOLOGY

The Mechanical Drafting and Design curriculum prepares mechanical draftsmen. Emphasis is placed upon ability to think and plan, as well as upon drafting procedures and techniques used by mechanical draftsmen.

Mechanical drafting and design technicians perform many aspects of drafting, such as developing the drawing of a section, subassembly or major component. Investigating design factors and availability of materials and equipment, production methods and facilities are frequent assignments. They assist in the design of units and control from specifications by utilizing drawings of existing units and reports on functional performance. They may draw components in industrial fields based on engineers' original design concepts or specific ideas. Also, they may be assigned as coordinators for the execution of related work or other design, production, tooling, material and planning groups. Technicians with experience in this classification may often supervise the preparation of working drawings. These technicians are employed in many types of manufacturing, fabrication, research development and service industries. Substantial numbers also are employed in communications; transportation; public utilities; consulting engineering firms; and federal, state, and local governments.

In the Drafting and Design curriculum three quarters of Computer Aided Drafting have been included. This will allow the student to enter industry as a CAD operator.

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER				
DFT 101 Technical Drafting	3	0	9	6
ENG 101 Grammar	3	0	0	3
MAT 121 Technical Mathematics	5	0	0	5
MEC 121 Industrial Methods I	0	0	3	1
MEC 209 Introduction to Metallurgy	3	2	0	4
	14	2	12	19
SECOND QUARTER				
DFT 102 Technical Drafting	3	0	9	6
ENG 102 Composition	3	0	0	3
MAT 122 Technical Mathematics	5	0	0	5
MEC 122 Industrial Methods II	0	0	3	1
MEC 216 Industrial Materials	5	0	0	5
	16	0	12	20

THIRD QUARTER					
DFT 103	Technical Drafting	3	0	9	6
ENG 103	Report Writing	3	0	0	3
MAT 123	Technical Mathematics	5	0	0	5
MEC 123	Industrial Methods III	0	0	3	1
PSY 217	Introduction to Psychology	3	0	0	3
		14	0	12	18
FOURTH QUARTER					
DFT 201	Technical Drafting and Computer Graphics	7	0	6	9
ENG 204	Oral Communication	3	0	0	3
PHY 100	Introductory Physics	4	2	0	5
SOC 102	Principles of Sociology	3	0	0	3
___ ___	Elective	3	0	0	3
		20	2	6	23
FIFTH QUARTER					
DFT 202	Technical Drafting and Computer Graphics	6	0	9	9
PHY 103	Physics: Electricity	3	2	0	4
PHY 106	Applied Mechanics	3	2	0	4
___ ___	Elective	3	0	0	3
		15	4	9	20
SIXTH QUARTER					
DFT 203	Design Drafting and Computer Graphics	6	0	9	9
MEC 205	Strength of Materials	3	2	0	4
MEC 235	Hydraulics and Pneumatics	3	0	3	4
		12	2	12	17

See pages 63 to 106 for course descriptions.

→ DFT 204 Technical Drafting 4 0 3 5
DFT 205 Computer Graphics 3 0 3 4

PARALEGAL TECHNOLOGY

The Paralegal Technology curriculum trains individuals to work under the general direction of lawyers, to relieve lawyers of routine matters, and to assist them in the conduct of more complicated and difficult tasks. The legal technician should be capable of doing independent legal work under the supervision of a lawyer, supervise secretaries in their work for the lawyer, and search out information and court facts for the lawyer. Training will include general subjects such as English, accounting and psychology, as well as specialized legal courses such as legal definitions, court systems, laws and techniques of investigation.

Graduates of the Paralegal Technology curriculum should be able to directly assist a lawyer or group of lawyers in most facets of law, but they must always work under the supervision of a lawyer. The legal technician will not be qualified to give legal advice, enter into courtroom procedure, or be involved in litigation except as an assistant to the lawyer. Paralegal graduates will be able to assist in work on probate matters, conducting investigations, searching public records, preparation of tax

forms, serving and filing legal documents, bookkeeping, library research, and providing office management assistance. Employment opportunities are available in public and private law firms and with individual lawyers.

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER				
BUS 102 Typewriting I	2	0	3	3
LEG 101 Introduction to Paralegalism	3	0	0	3
LEG 115 Commercial Law I	5	0	0	5
LEG 135 Legal Systems	5	0	0	5
MAT 110 Business Mathematics	5	0	0	5
	20	0	3	21
SECOND QUARTER				
BUS 103 Typewriting II	2	0	3	3
BUS 120 Accounting I	5	2	0	6
ENG 101 Grammar	3	0	0	3
LEG 116 Commercial Law II	5	0	0	5
MAT 130 Advanced Business Math	5	0	0	5
	20	2	3	22
THIRD QUARTER				
BUS 121 Accounting II	5	2	0	6
ENG 102 Composition	3	0	0	3
LEG 132 Legal Research/Bibliography	4	6	0	7
LEG 214 Property I	3	0	0	3
	15	8	0	19
FOURTH QUARTER				
LEG 113 Family Law	3	0	0	3
LEG 117 Torts and Litigation Preparation	3	0	0	3
LEG 215 Property II: Title Search	3	2	0	4
LEG 217 Elements of Criminal Law and Procedure	5	0	0	5
___ ___ Elective	3	0	0	3
	17	2	0	18
FIFTH QUARTER				
BUS 128 Computerized Accounting - Electronic Spreadsheet	1	2	0	2
BUS 229 Taxes I	3	2	0	4
LEG 216 Property III: Loan Closings	1	2	0	2
LEG 224 Wills	3	2	0	4
LEG 230 Bankruptcy and Collection	3	0	0	3
	11	8	0	15
SIXTH QUARTER				
BUS 222 Word Processing	2	0	3	3
BUS 230 Taxes II	3	2	0	4
PSY 217 Introduction to Psychology	3	0	0	3
SOC 102 Principles of Sociology	3	0	0	3
___ ___ Elective	3	0	0	3
	14	2	3	16

SEVENTH QUARTER					
ENG 204	Oral Communication	3	0	0	3
LEG 290	Paralegal Internship	0		(20 Co-op)	2
LEG 291	Paralegal Office Procedures	3	0	0	3
SOC 206	American Institutions	3	0	0	3
		9	0	0	11

See pages 63 to 106 for course descriptions.

SECRETARIAL - ENGINEERING AND TECHNICAL

The purposes of the Secretarial - Engineering and Technical curriculum are to prepare the individual to enter the secretarial profession in firms concerned with research, development and production; provide an educational program for individuals wanting education for upgrading (moving from one scientific secretarial position to another), or retraining (moving from present position to a scientific secretarial position); and provide an opportunity for individuals wanting to fulfill professional or general interest needs.

These purposes will be fulfilled through skill development in the areas of typewriting, shorthand, transcription, and business machines and through knowledge of the scientific method, the need for scientific accuracy and a technical vocabulary. Through these skills the individual will be able to perform office-related activities and through the development of personal competencies and qualities will be provided the opportunity to enter the engineering or technical secretarial profession.

		HOURS PER WEEK			
		Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER					
BUS 102	Typewriting I	2	0	3	3
BUS 106	Shorthand I	3	2	0	4
ENG 105	Grammar and Composition	3	2	0	4
MAT 110	Business Mathematics	5	0	0	5
PSY 217	Introduction to Psychology	3	0	0	3
		16	4	3	19
SECOND QUARTER					
BUS 103	Typewriting II	2	0	3	3
BUS 107	Shorthand II	3	2	0	4
BUS 120	Accounting I	5	2	0	6
ENG 106	Grammar and Composition	3	2	0	4
MAT 130	Advanced Business Mathematics	5	0	0	5
		18	6	3	22

THIRD QUARTER					
BUS	104	Typewriting III	2	0	3	3
BUS	108	Shorthand III	3	2	0	4
BUS	115	Business Law I	5	0	0	5
BUS	121	Accounting II	5	2	0	6
BUS	128	Computerized Accounting - Electronic Spreadsheet	1	2	0	2
			16	6	3	20
FOURTH QUARTER						
BUS	183	Terminology and Vocabulary	3	0	0	3
BUS	205	Advanced Typewriting I	2	0	3	3
BUS	206	Dictation and Transcription I	3	2	0	4
ECO	102	Economics I	3	0	0	3
EDP	104	Data Processing Theory	3	0	0	3
ENG	204	Oral Communication	3	0	0	3
			17	2	3	19
FIFTH QUARTER						
BUS	207	Dictation and Transcription II	3	2	0	4
BUS	209	Advanced Typewriting II	2	0	3	3
DFT	104	Blueprint Reading-Mechanical	3	0	0	3
EDP	250	BASIC Business Programming	2	2	0	3
SOC	102	Principles of Sociology	3	0	0	3
___	___	Elective	3	0	0	3
			16	4	3	19
SIXTH QUARTER						
BUS	112	Filing	3	0	0	3
BUS	213	Office Procedures	1	2	0	2
BUS	222	Word Processing	2	0	3	3
BUS	235	Business Management	3	2	0	4
SOC	206	American Institutions	3	0	0	3
___	___	Elective	3	0	0	3
			15	4	3	18

See pages 63 to 106 for course descriptions.

TECHNICAL COURSE DESCRIPTIONS

ANT 105 - Introduction to Anthropology
This course is an introduction to the physical, archaeological, linguistic, and ethnological fields of anthropology; biological and cultural evaluation of man.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: SOC 102

ART 201 - Art History and Appreciation
This course is an introduction to the history of art and provides a survey of the general periods of art from prehistoric times through the Early Christian Era.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

ART 241 - Beginning Painting
This is a beginning course investigating a variety of media, techniques, and subjects.
Course Hours Per Week: Class 2, Lab 6. Quarter Hours Credit 5.
Prerequisite: None

BIO 101 - Human Anatomy and Physiology I
This course is a study of the organizational plan of the human body and the body systems concerned with motor activities, control and integration of functions, and reproduction. Laboratory experiences provide opportunities to see animal specimens illustrative of systems being studied.
Course Hours Per Week: Class 4, Lab 2. Quarter Hours Credit 5.
Prerequisite: None

BIO 103 - Anatomy and Physiology
This course is a study of the human body and the body systems involved in motor activities, control and integration of functions, and reproduction. Laboratory experiences provide opportunities to study the skeletal system and dissect an animal to study body structures. Some medical and anatomical terminology will be included.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: None

BIO 107 - Human Anatomy and Physiology II
This course is designed to familiarize the student with the changing body during normal growth and development, both physically and physiologically, as well as psychologically. The different phases of life, what effects society has during these phases, and how the body adjusts accordingly will be studied. The disease process will also be investigated to show how the body strives to maintain homeostasis during illness. The use and results or medical intervention will be covered during this study. Some of the more common diseases will be looked at, and the student will be encouraged throughout this course to apply the material studied to daily living experiences.
Course Hours Per Week: Class 4, Lab 2. Quarter Hours Credit 5.
Prerequisite: BIO 101

BIO 110 - General Biology
This course is an introduction to the concepts of biology. Emphasizes the modern view of man and other living organisms. Includes topics on the cell, energy, genetics. and ecology.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: None

BIO 113 - Environmental Measurements
This is a field course in which students will be involved in doing ecological surveys of the Cape Fear region. Collection methods and data compilation will be emphasized throughout the course.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

BIO 115 - Medical Terminology and Vocabulary I
This is an introductory course for paramedical personnel which deals with basic tools for building a medical vocabulary and identifying anatomical roots, prefixes, and suffixes of words, as well as verbs and adjectives. Analyzing the terms and structure of these medical words will produce recognition of anatomical body parts, diseases, operations, tumors, drugs, and various other descriptive terms, when studying the various systems of the body.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

BIO 116 - Medical Terminology and Vocabulary II
This is a continuation of the study of medical terminology in building a medical vocabulary by utilizing anatomical roots, prefixes, and suffixes of words, as well as verbs and adjectives. Further emphasis is placed on anatomical body parts, diseases, operations, tumors, drugs, and descriptive terms, when studying the various systems of the body.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: BIO 115

BIO 117 - Medical Terminology and Vocabulary III
This course is a continuation and conclusion of the study of medical terminology and building of a medical vocabulary. Anatomical body parts, diseases, operations, drugs, and mental disorders will be discussed.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: BIO 116

BIO 129 - Marine Animals of North Carolina
This is a lecture course introducing students to marine organisms in North Carolina. Marine plankton, jellyfish, seashells, starfish, fishes, birds, and whales will be briefly studied. Preserved specimens will be used when available. Films and slides will also be utilized.
Course Hours Per Week: Class 4. Quarter Hours Credit 4.
Prerequisite: None

BIO 131 - Marine Biology
Marine and estuarine habitats and organisms will be examined in this course. An ecological approach to the study of organisms in the local marine communities will be taken.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

BIO 132 - Marine Invertebrate Zoology
Taxonomy and classification of marine invertebrate animals will be studied in this course. Preserved animals will be utilized for learning the taxonomic relationships between various marine invertebrates. Laboratory periods will be used to study some of the behavioral characteristics of selected animals.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

BIO 201 - Aquarium Systems
This is a laboratory oriented course emphasizing the proper techniques of setting up marine aquaria and maintaining healthy marine animals in a closed seawater system.
Course Hours Per Week: Class 1, Lab 2. Quarter Hours Credit 2.
Prerequisite: None

BIO 213 - Marine Vertebrate Zoology
Identification, classification, and natural history of marine vertebrates are the studies in this course.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: None

BIO 215 - Microbiology
This course is an introduction to the biology of microorganisms and their impact on medicine, health, industry, agriculture, and the environment. The basic techniques needed to isolate, observe, identify, and control microorganisms will be covered.
Course Hours Per Week: Class 3, Lab 4. Quarter Hours Credit 5.
Prerequisite: BIO 110

BUS 100 - Typewriting
This is an introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts. A minimum speed requirement is 20 gross words a minute with 5 errors allowed.
Course Hours Per Week: M. Lab 3. Quarter hours Credit 1.
Prerequisite: None

BUS 101 - Introduction to Business
This is a survey of the business world with particular attention devoted to the structure of the various types of business organization, methods of financing, internal organization, and management.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

BUS 102 - Typewriting I
This course is an introduction to the touch typewriting system with emphasis on correct techniques, mastery of the keyboard, simple business correspondence, tabulation, and manuscripts. The minimum speed requirement is 20 gross words a minute with 5 errors allowed.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

BUS 103 - Typewriting II
Instruction emphasizes the development of speed and accuracy with further mastery of correct typewriting techniques. These skills and techniques are applied in tabulation, manuscript, correspondence, and business forms. Minimum speed requirement is 30 gross words a minute with 5 errors allowed.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: BUS 102 or Equivalent

BUS 104 - Typewriting III
This course places emphasis on production typing problems and speed building. Attention to the development of the student's ability to function as an expert typist, and producing mailable copies are stressed. The production units are tabulation, manuscript, correspondence, and business forms. The minimum speed requirement is 35 gross words a minute with 4 errors allowed.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: BUS 103 or equivalent

BUS 106 - Shorthand I
This is a beginning course in the theory and practice of reading and writing Gregg Shorthand. Emphasis is placed on phonetics, penmanship, work families, brief forms, and phrases.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: None

BUS 107 - Shorthand II
This course is a continuation of the theory and practice of Gregg Shorthand. Emphasis will be placed on continued study of theory and further development of dictation and transcription.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: BUS 106 or equivalent

BUS 108 - Shorthand III
This is a Gregg Shorthand course designed to build skill in theory and writing. Emphasis is placed on development of speed in dictation and accuracy in transcription. An introduction to office-style dictation will be used.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: BUS 107

BUS 110 - Speedwriting and Transcription I
This course is intended for individuals who want to achieve marketable skills in stenography. The course is also designed for individuals who want to take notes more rapidly and accurately for semiprofessional or nonprofessional endeavors. Students will be given an opportunity to build speeds of 100 to 120 words a minute and take dictation accurately. Students will become acquainted with business activities in today's office and will become proficient in typing, spelling, and grammar.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: None

BUS 111 - Speedwriting and Transcription II
This course is designed to continue the quest for marketable skills in stenography. Students will be given an opportunity to enhance skills acquired in part one of speedwriting. This course basically consists of taking and transcribing mailable copy business documents.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: BUS 110

BUS 112 - Filing
This is a course in filing to instruct students to keep and to locate filed records. This will be accomplished by using a standard system of indexing papers to be filed.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

BUS 115 - Business Law I
This is an introductory course designed to acquaint the student with certain fundamentals and principles of business law, including contracts, negotiable instruments, and agencies.
Course Hours Per Week: Class 5. Quarter Hours Credit 5
Prerequisite: None

BUS 116 - Business Law II
This is a follow-up course to Business Law I with a more in-depth study of law covering such topics as bailments, sales, riskbearing, partnership, corporation, mortgages, and property rights.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: BUS 115

BUS 120 - Accounting I
This first course in accounting covers the principles, techniques, and tools of accounting. The student is introduced to the mechanics of accounting. The process of accounting includes the collecting, summarizing, and analysis of financial information.
Course Hours Per Week: Class 5, Lab 2. Quarter Hours Credit 6.
Prerequisite: MAT 110 or MAT 121

BUS 121 - Accounting II
This course is a study of partnership and corporation accounting including a study of payrolls, federal and state taxes. Emphasis is placed on the recording, summarizing, and interpreting data for management controls rather than on bookkeeping skills. Accounting services are shown as they contribute to the recognition and solution of management problems.
Course Hours Per Week: Class 5, Lab 2. Quarter Hours Credit 6.
Prerequisite: BUS 120

BUS 122 - Accounting III
This course is concerned with the design of the system of records, the preparation of reports based on recorded data, and the interpretation of the reports in a business firm. The use of accounting data and reports provides management with the information as to what has taken place in the business and how the information is used to make future business decisions.
Course Hours Per Week: Class 5, Lab 2. Quarter Hours Credit 6.
Prerequisite: BUS 121

BUS 123 - Business Finance I
This course explains the scope, principles, and social importance of business finance to the different types of business ownership in our economic systems. Through the analysis of the financial statements - the balance sheets and income statements - the sources and uses of funds may be obtained for any form of business.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: BUS 121

BUS 124 - Business Finance II
This course explains the scope, principles, and social importance of business finance to the different types of business ownership in our economic systems. Through the analysis of the financial statements - the balance sheets and income statements - the sources and uses of funds may be obtained for any form of business. Financial statements are used by management as the basis for planning operations, including procurement of adequate financing, and as a means of exercising control over the financial position of the business and the efficient and profitable use of assets.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: BUS 123

BUS 125 - Accounting IV
This course examines the basic analytic tools used by a firm's management to plan, staff, finance, and control operations. Interpretation and determination of various quantitative and financial statistics is emphasized.
Course Hours Per Week: Class 5, Lab 2. Quarter Hours Credit 6.
Prerequisite: BUS 122

BUS 126 - Personal Finance
This course is designed to enable the student to analyze and direct his own or family's financial affairs. The student is given a general overview in the areas of money management, borrowing, investment principles, and retirement.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

BUS 128 - Computerized Accounting - Electronic Spreadsheet
This is a course in computer record keeping. The content of the course will include the general ledger and the preparation of financial statements, data entry and updating of accounts receivable and accounts payable, inventory purchase cost and control, and sales and invoice preparation.
Course Hours Per Week: Class 1, Lab 2. Quarter Hours Credit 2.
Prerequisite: BUS 120

BUS 183 - Terminology and Vocabulary
This is a thorough course in word study appropriate for use in business, technical, and professional offices. It emphasizes spelling and meaning of words, with an in-depth study of word stems, prefixes, and suffixes.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

BUS 205 - Advanced Typewriting I
In this course, emphasis is placed on the development of individual production rates. The student learns the techniques needed in planning and in typing projects that closely approximate the work in business offices. These projects include review of letter form, methods of duplicating, statistical tabulation, and the typing of reports, manuscripts, and legal documents. The minimum speed requirement is 40 gross words a minute with 3 errors.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: BUS 104

BUS 206 - Dictation and Transcription I
Dictation and Transcription I develops the skill of taking dictation and of transcribing at the typewriter. A review of theory and the dictation of familiar and unfamiliar material at varying rates of speed is the basic course content. A minimum dictation rate of 60 words per minute for three minutes on new material is required.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: BUS 108

BUS 207 - Dictation and Transcription II
This course covers speed building materials appropriate to the course of study. The student develops the accuracy, speed, and vocabulary that enable him/her to meet the stenographic requirements of business and professional offices. A minimum dictation rate of 70 words per minute is required for three minutes on new material.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: BUS 206

BUS 209 - Advanced Typewriting II
Emphasis is placed on speed building and on typing projects related to actual office situations. These include additional duplication, tabulation, and the typing of rough draft and straight copy documents, reports, and forms used in legal, technical, and business offices. A minimum speed requirement is 45 gross words a minute with 3 errors allowed.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: BUS 205

BUS 213 - Office Procedures
Dictaphones, typewriters, electronic calculators, copying machines, and similar modern office equipment are utilized by students to efficiently produce quality office documents such as letters, memos, payrolls, invoices, manuscripts, and statistical charts in a simulated office situation.
Course Hours Per Week: Class 1, Lab 2. Quarter Hours Credit 2.
Prerequisite: None

BUS 222 - Word Processing
This course introduces the student to word processing procedures and equipment. It is designed to familiarize students with the concept of word processing and the input and output equipment used to transform ideas and information into readable forms of communication.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: BUS 102

BUS 229 - Taxes I
This course is the application of federal and state taxes to various businesses and business conditions. It is a study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise and inheritance.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: MAT 110 or MAT 121

BUS 230 - Taxes II
This course is a continuation of the study of the following taxes: income, payroll, intangible, capital gain, sales and use, excise, and inheritance taxes.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: BUS 229

BUS 232 - Sales Development
This course is a study of retail, wholesale and specialty selling. Emphasis is placed upon mastering and applying the fundamentals of selling. Preparation for and execution of sales demonstrations is required.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

BUS 235 - Business Management
This course explains the principles of business management, including an overview of the major functions of management, such as planning, staffing, controlling, directing, and financing.
Course Hours Per WeeK Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: None

BUS 239 - Marketing
This course presents the marketing structure within the framework of the U.S. economic system. The course includes the movement of goods from producer to consumer through channels of distribution, pricing strategies, consumer behavior and market segmentation.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

BUS 272 - Principles of Supervision
The student is introduced to the basic responsibilities and duties of the supervisor and his relationship to superiors, subordinates, and associates. Major emphasis is placed on the role of the supervisor in securing an effective work force. Methods of supervision are stressed.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

CAD 242 - Computer Graphics
This course is an introduction to Computer-Aided Drafting and Design systems. It will prepare students to operate the systems and understand the applications of computer graphics to industry standards. Students will learn to use an interactive computer graphics system to prepare drawings on a CRT. They will store and retrieve drawings and related information on a magnetic disc and produce commercial quality copies using a computer-driven plotter.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4.
Prerequisite: DFT 103 or consent of the instructor

CHM 101 - Introduction to Chemistry
This course offers a basic introduction to elements, compounds, mixtures, symbols, formulas, and weight relations in reactions and solutions. Students will be introduced to basic laboratory equipment and techniques.
Course Hours Per Week: Class 4, Lab 2. Quarter Hours Credit 5.
Prerequisite: MAT 121

CHM 109 - Water Analysis I
This is a course in the practical analysis of water with emphasis on marine-oriented techniques and procedures.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: CHM 101 or CHM 118

CHM 114 - Basic Chemical Concepts I
This is the first course of a two-quarter sequence in which the basic fundamentals of chemistry are introduced. Topics to be covered include: measurements; properties of matter; elements, compounds, and mixtures; ions and compound formulas; moles; reactions and weight relations; solutions; and oxidation-reduction reactions. The laboratory sessions stress routine apparatus and techniques in conjunction with lecture material.
Course Hours Per Week: Class 5, M. Lab 6. Quarter Hours Credit 7.
Prerequisite: None

CHM 115 - Basic Chemical Concepts II
This is the second course of a two-quarter sequence in which the basic fundamentals of chemistry are introduced. Topics to be covered include: electrochemistry, gases, solubility, and pH. The laboratory sessions stress routine apparatus and techniques in conjunction with lecture material. A special unit on laboratory hazards and safety is included.
Course Hours Per Week: Class 5, M. Lab 6. Quarter Hours Credit 7.
Prerequisite: CHM 114

CHM 116 - Descriptive Chemistry
This is a course in which specific elements, their properties, compounds, sources, and uses are discussed. In the laboratory, preparation, detection and reactions of selected groups of elements are explored. In conjunction with ENG 103, the student prepares two (2) reports on assigned elements.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: CHM 115

CHM 117 - Unit Processes
This is a laboratory course in which the student sets up and carries out such procedures as distillation, reflux, chromatography (paper, thin layer, column, and gas-liquid [GLC], high-performance liquid [HPLC]), extraction, ion exchange, and spectroscopy (infrared, ultraviolet visible, and atomic absorption).
Course Hours Per Week: Class 1, M. Lab 18. Quarter Hours Credit 7.
Prerequisites: CHM 116, CHM 230

CHM 118 - Basic Chemistry
This course has been designed to acquaint the student with some of the basic chemical concepts. Discussions of hazardous materials will be included.
Course Hours Per Week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisite: MAT 121

CHM 150 - Industrial Operations
This is a survey course in which selected examples of process equipment used in the chemical industry are discussed. The students are introduced to and practice calculations necessary in the design and utilization of such equipment.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisites: CHM 116, CHM 230

CHM 224 - Water Analysis II
This course a continuation of Water Analysis I as a course in the practical analysis of water with emphasis on marine-oriented techniques and procedures.
Course Hours Per Week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisite: CHM 101 or CHM 118

CHM 230 - Organic Chemistry I
This is a survey course in which the nomenclature and properties of organic compounds are introduced. An introduction to infrared spectra is included.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: CHM 115

CHM 231 - Organic Chemistry II
This is a continuation of the Organic Chemistry series in which organic reactions and syntheses are discussed and carried out in the laboratory. The students analyze results with such techniques as infrared spectroscopy and gas chromatography.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisites: CHM 230, CHM 117

CHM 232 - Organic Chemistry III
This is a continuation of the Organic Chemistry series in which the chemistry of carbonyl compounds is stressed. In the laboratory, individual student projects are carried out.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4.
Prerequisite: CHM 231

CHM 233 - Biochemical Concepts
This course is a continuation of organic chemistry, dealing with the structure, properties, and metabolism of biomolecules such as lipids, carbohydrates, proteins, and enzymes. Production, formulation, and testing of food additives and pharmaceuticals will be covered.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: CHM 232

CHM 243 - Industrial Analysis I (Qualitative)
This is a laboratory course in which the students are expected to detect and report the presence of unknown cations and anions in prepared test solutions. (Qualitative Analysis)
Course Hours Per Week: Class 1, M. Lab 6. Quarter Hours Credit 3.
Prerequisite: CHM 117

CHM 244 - Industrial Analysis II (Quantitative)
This is a laboratory course in which routine quantitative analyses are carried out. The techniques of gravimetry, titration, electroanalysis, spectroscopy (UV-VIS, AA, AE, colorimetry), chromatography (TLC, GC), and specific ion meters are practiced. Calibrations are stressed, and statistical analyses of results are practiced.
Course Hours Per Week: Class 1, M. Lab 9. Quarter Hours Credit 4.
Prerequisite: CHM 243

CHM 245 - Industrial Analysis III (Quantitative)
This is a course in which the sources, uses, analyses, and treatments of water are discussed. In the laboratory, quantitative analysis, begun in the sixth quarter (CHM 244), is continued with emphasis on water analyses.
Course Hours Per Week: Class 3, M. Lab 9. Quarter Hours Credit 6.
Prerequisite: CHM 244

CIV 103 - Surveying for Construction Trades
Care and use of instruments; theory and practice of plane surveying including taping, differential and profile leveling, transit, stadia, and transit-tape survey will be covered in this course.
Course Hours Per Week: Class 4, Lab 4. Quarter Hours Credit 6
Prerequisite: None

CJC 101 - Introduction to Criminal Justice
This is a general course designed to introduce the student to the historical, philosophical and contemporary views in the criminal justice system. This course also includes a study of the local, state and federal criminal justice agencies, their jurisdiction, organization, purpose, and objective.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

CJC 102 - Introduction to Criminology
This is a general course designed to familiarize the student with contemporary and historical theories of criminal behavior. An overview of social factors dealing with criminal behavior will also be given.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

CJC 103 - Introduction to Criminal Investigation
This is a study of the elements of investigation from discovery through presentation in court. The student is introduced to preliminary investigation, collection and preservation of evidence, interviews and interrogation, descriptions of persons and property, sources of information, investigative report writing and case presentation.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

CJC 104 - Patrol Procedure and Traffic Enforcement
This course is a study of patrol techniques used by law enforcement agencies. Emphasis is placed on motor vehicle laws most frequently violated, traffic accident reports and overall traffic enforcement objectives. Also examined are police operational procedures used in answering calls.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

CJC 105 - Firearms
This is a study to help the student develop an understanding, use and respect for various types of firearms. Range practice will be given in the use of rifles, shotguns, and pistols with a special effort made to develop proficiency in the use of the service revolver. Instruction will be given in non-lethal weapons such as tear gas, and defensive tactics used in the handling of arrested persons.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

CJC 115 - Criminal Law
This course is a study of North Carolina substantive criminal law. The elements of criminal laws, legal definitions, and rules of evidence are examined.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

CJC 118 - Defensive Tactics
This is a course designed to provide the student with basic self-defense skills. Instruction will include preliminary exercises to develop balance, movement, and leverage as used in jujitsu.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

CJC 140 - Fingerprint Identification
This course is a survey of the use of fingerprints in criminal investigations. Examination, comparison, and classification of fingerprints is included. The Henry System of classification is taught with additional modifications and F.B.I. extensions.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

CJC 141 - Handwriting Identification
This is an introduction to the fundamentals of handwriting identification. An analysis of standard and deviant letters is studied in comparing questioned writings.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

CJC 203 - Forensic Photography
A survey of the use of photography in criminal investigation is examined in this course. The use of photographic equipment and darkroom procedures are included. Simulated crime scene exhibits are prepared for moot court testimony.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

CJC 205 - Scientific Evidence
This course examines the admissibility of evidence in a court of law. Emphasis is given to the types of scientific evidence which is within the jurisdiction of the courts.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

CJC 208 - Arson Investigation
This is a study of the techniques used to investigate arson cases. It includes investigative techniques, crime scene investigation, and laws applicable to unlawful burning.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

CJC 210 - Criminal Investigation
This course is a study of the fundamentals of criminal investigation. Specific offenses are examined such as: burglary, robbery, homicide, and larceny.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

CJC 211 - Introduction to Criminalistics
This is a general survey of the methods and techniques used in modern scientific investigation of crime, with emphasis on the practical use of these methods by the students. Laboratory techniques will be demonstrated and the student will participate in actual use of scientific equipment.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: CJC 210

CJC 214 - Pre-Service Law Enforcement Training
This course is designed to provide the student with the skills and knowledge necessary to perform those tasks essential to function in law enforcement. The course consists of 121 hours of instruction in the following topic areas:

(1)	Course Orientation	1 Hour
(2)	Laws of Arrest, Search, and Seizure	16 Hours
(3)	Mechanics of Arrest:	
	Arrest Procedures	8 Hours
	Vehicle Stops	6 Hours
	Custody Procedures	2 Hours
	Processing, Fingerprinting, and Photographing Arrestee	4 Hours
(4)	Defensive Tactics	16 Hours
(5)	Firearms	48 Hours
(6)	Law Enforcement Driver Training	16 Hours
(7)	Testing	4 Hours

Course Hours Per Week: Class 2, M. Lab 9. Quarter Hours Credit 5.
Prerequisite: None

CJC 215 - Law Enforcement Probationary Training

This course consists of 253 hours of specific instruction in the following area

(1)	Course Orientation	7 Hours
(2)	Constitutional Law	4 Hours
(3)	Law Enforcement Communications and Information Systems	4 Hours
(4)	Elements of Criminal Law	24 Hours
(5)	Juvenile Laws and Procedures	8 Hours
(6)	Emergency Medical Services	24 Hours
(7)	Patrol Techniques	16 Hours
(8)	Crime Prevention Techniques	4 Hours
(9)	Field Notetaking and Report Writing	12 Hours
(10)	Crisis Management	10 Hours
(11)	Deviant Behavior	10 Hours
(12)	Civil Disorders	12 Hours
(13)	Criminal Investigation	28 Hours
(14)	Interviews: Field and In-Custody	8 Hours
(15)	Controlled Substances	8 Hours
(16)	ABC Laws and Procedures	4 Hours
(17)	Electrical and Hazardous Materials Emergencies	6 Hours
(18)	Motor Vehicle Laws	20 Hours
(19)	Techniques of Traffic Law Enforcement	6 Hours
(20)	Preparing for Court and Testifying in Court	12 Hours
(21)	Dealing with Victims and the Public	8 Hours
(22)	Testing and Examination	9 Hours
*(23)	Review	6 Hours
*(24)	Testing	3 Hours

*Not mandated by Title 12 of the Administrative Code, but is required by Cape Fear Community College.

Course Hours Per Week: Class 11, M. Lab 12. Quarter Hours Credit 15.
Prerequisite: None

CJC 216 - Police Officer Training

This course consists of twenty (20) hours of Traffic Accident Investigation and two (2) hours of review. Students who wish to take the State examination for p officer must successfully complete CJC 214, CJC 215, and CJC 216.
Course Hours Per Week: Class 2. Quarter Hours Credit 2.
Prerequisite: None

CJC 217 - Deputy Sheriff Training

The topics in this course consist of the Civil Process and Custody Procedures. Student will receive twenty-four (24) hours of instruction on the Civil Process eight (8) hours on Custody Procedures, and one (1) hour of review. Students wh to take the State examination for deputy sheriff must successfully complete CJC CJC 215, and CJC 217.
Course Hours Per Week: Class 1, Lab 2. Quarter Hours Credit 2.
Prerequisite: None

CJC 220 - Law Enforcement Organization and Management
Included in this course is an examination of the principles of organizational structure within police agencies. The duties and responsibilities of the polic administrative staff will be examined. Recruitment, training, and discipline will be presented as part of the course study.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

CJC 222 - Crime Scene Investigation
This is a course which emphasizes collecting physical evidence at the crime scene. Topics included in this course are identification of physical evidence, the care of physical evidence, and the various types of evidence.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

CJC 224 - Industrial Security
This course is a general survey of the methods and techniques utilized in theft prevention. Primary emphasis will be placed on alarm systems used in industry.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

CJC 230 - Contemporary Issues in Criminal Justice
This course is a study of controversial issues affecting the criminal justice system. Topics may include use of deadly force, civil liability, police discretion, politics, and unionism.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

CJC 240 - Firearms Identification
This course is an introduction to the fundamentals of bullet and tool mark comparisons. The comparison microscope is used by the students to examine the bullets and tool marks for individual and class characteristics.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

CON 101 - Construction Estimating
This is a basic course in construction estimating. It is designed to acquaint the student with techniques of construction estimating and the use of mensuration tables.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4.
Prerequisite: None

DFT 100 - Technical Drafting
The field of drafting is introduced. The student learns the elementary practices and principles employed by draftsmen. This knowledge is put to use by reading actual blueprints. Orthographic, pictorial sketching, standards and practices of dimensioning are included for communication from technician to machinist or other artisan.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

DFT 101 - Technical Drafting
The field of drafting is introduced. The student learns the elementary practices and principles employed by draftsmen. This knowledge is put to use by reading actual blueprints. Orthographic, pictorial sketching, standards and practices of dimensioning are included for communication from technician to machinist or other artisan. This course covers more material and requires more drawings to be graded than DFT 100.
Course hours Per Week: Class 3, M. Lab 9. Quarter Hours Credit 6.
Prerequisite: None

DFT 102 - Technical Drafting
This course covers material from the application of orthographic projection principles to the more complex drafting problems. Primary and secondary auxiliary views, simple and successive revolutions, and all types of sections and conventions will be studied.
Course Hours Per Week: Class 3, M. Lab 9. Quarter Hours Credit 6.
Prerequisite: DFT 101

DFT 103 - Technical Drafting
This course covers the graphic symbols for electrical and electronic diagrams, use and application of welding symbols, principles and methods of pipe drafting procedures of drawing and projecting axonometric, oblique, and perspective drawings. Emphasis will be placed on practical application.
Course Hours Per Week: Class 3, M. Lab 9. Quarter Hours Credit 6.
Prerequisite: DFT 102

DFT 104 - Blueprint Reading: Mechanical
The interpretation and reading of blueprints, charts, instruction and service manuals, and wiring diagrams are covered. Information on the basic principles of lines, views, dimensioning procedures, and notes will also be included.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

DFT 105 - Pipe Drafting I
This course provides explanations of pipe drawings, reference materials, terms, and abbreviations. The American National Standard pipe symbols will be used to construct isometric, orthographic, and schematic pipe drawings.
Course Hours Per Week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisite: Demonstrated knowledge of basic drawings

DFT 114 - Pipe Drafting II
This course introduces the student to technical information, data and suggested procedures relating to properties and usage of materials, basic design, and other subjects of interest in the piping field. It will provide the student with reference material on design properties of pipe, flow of fluids, and line expansion and flexibility. Also, basic skills will be provided to the student that are necessary for the solution of the most common problems in fluid flow, pipe-stress analysis, and support for practical application in industrial piping systems.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: DFT 105

DFT 117 - Drafting and Blueprint Reading
The field of drafting is introduced. The student learns the elementary practices and principles employed by draftsmen. This knowledge is put to use reading actual blueprints. Orthographic, pictorial sketching, standards and practices of dimensioning are included for communication from technician to machinist or other artisan.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4.
Prerequisite: None

DFT 201 - Technical Drafting and Computer Graphics
Topographical drawing and mapping will be introduced. Plat plans, contours and profiles will be drawn. Use and care of the transit will be studied in the field. Dimensioning practices for "details" and working drawing, as approved b the American Standards Association will also be included. Screws, screw threads, springs, keys, and rivets will also be included in the course of study computer graphics will be used to give drafting students a basic working knowledge of hardware and solftware interaction, and how these basics may be applied to computer graphics in general.
Course Hours Per Week: Class 7, M. Lab 6. Quarter Hours Credit 9.
Prerequisite: DFT 103

DFT 202 - Technical Drafting and Computer Graphics
Basic mechanisms of motion transfer, gears, and cams will be studied and drawn with emphasis on methods of specifying, calculating, dimensions, and delineating. This course covers intersection and developments along with their practical solution. Where applicable, model solutions accompany the problems. Advanced techniques in Computer Aided Drafting (CAD) will also be included. Emphasis will be placed on the integration of a prior knowledge of drafting standards into computer graphic commands.
Course Hours Per Week: Class 6, M. Lab 9. Quarter Hours Credit 9.
Prerequisite: DFT 201

DFT 203 - Design Drafting and Computer Graphics
Research to solve a problem in design will be implemented by consulting various manuals, periodicals, and through laboratory experiments. Preliminary design sketches, layout drawings, detail drawings, assembly and sub-assembly drawings, and specifications are required as a part of the problem. Computer graphics will be continued with an emphasis on design.
Course Hours Per Week: Class 6, M. Lab 9. Quarter Hours Credit 9.
Prerequisite: DFT 202

DFT 208 - Introduction to Architectural Drafting
The introduction to basic principles of architectural drawings will be studied. Included are drawings, floor plans, elevations, wall sections, details, site plans, electrical plans, plumbing plans, heating plans, and foundation plans. Following this information, the course will introduce model making as a media for study and visualization of architectural and engineering concepts.
Course Hours Per Week: Class 3, M. Lab 9. Quarter Hours Credit 6.
Prerequisite: DFT 102 or instructor's approval

DMK 163 - Fundamentals of Real Estate
This course consists of instruction in fundamental real estate principles and practices, including real estate law, financing, brokerage, closing, valuation, management, and taxation. Also included is instruction on residential building construction, land use, the real estate market and the North Carolina Real Estate License Law and Rules/Regulations of the North Carolina Real Estate Licensing Board.
Course Hours Per Week: Class 6. Quarter Hours Credit 6.
Prerequisite: None

DMK 164 - Real Estate Law
This course consists of advanced level instruction in real property ownership and interests, transfer of title to real property, land use controls, real estate brokerage and the law of agency, real estate contracts, landlord and tenant law, mortgages/deeds of trust, property insurance, federal income taxation of real estate, the N.C. Real Estate License Law, Rules/Regulations of the N.C. Real Estate Licensing Board, and the Licensing Board's "Trust Account Guidelines."
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: DMK 163 or an equivalent course approved by the North Carolina Real Estate Licensing Board

DMK 209 - Real Estate Finance
This course consists of advanced level instruction on the major aspects of financing real estate transactions, including sources of mortgage funds, the secondary mortgage market, financing instruments, types of mortgage loans, underwriting mortgage loans, consumer legislation affecting real estate financing, real property valuation, closing real estate sales transactions, and finance mathematics.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: DMK 163 or an equivalent course approved by the North Carolina Real Estate Licensing Board

DMK 271 - Real Estate Brokerage Operations
This course consists of basic instruction in the various aspects of real estate brokerage operations, including establishing a brokerage firm, management concepts and practices, personnel and training, marketing operations, records and bookkeeping systems (including trust account bookkeeping), and financial operations.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: DMK 163 or an equivalent course approved by the North Carolina Real Estate Licensing Board

DMK 292 - Real Estate Appraisal
This course studies the functions of the real estate appraisers; planning, and the process of appraisal, site evaluation, building materials, and equipment. The three methods of appraising property are considered: Income Approach, Market Data Approach, and the Cost Approach, including depreciation and renovation.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

DMK 296 - Property Management
This course studies the nature of property management, types of property, lease preparation, property maintenance and protection of property (Insurance). Other topics include accounting and budgeting in property management, tenant selection, and legal and professional requirements of a property manager.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

ECO 102 - Economics I
This course introduces Business Administration, Secretarial, and General Office students to the rudiments of economics. The course emphasizes supply and deman analysis, market equilibrium and cost/revenue analysis from the points of view of consumers and the individual firm.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

ECO 104 - Economics II
This course extends the basics acquired in Economics I into coverage of the economy of an entire country. The course emphasizes national economic measurements, growth cycles, and government policies. Economics examines the monetarist and neo-keynesian debates of economic policy.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: ECO 102

ECO 108 - Consumer Economics
Students will study the efficient use of family resources with emphasis placed upon money management in the purchasing of shelter, food, transportation, clothing, and insurance. Included will be a study of the productive use of credit and retail sales.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDP 100 - Computer Literacy
This course is an introductory course designed to give the novice a basic understanding of data processing and information management in today's computer environment. It deals with the currently most used forms of data processing, basic vocabulary tools, and an understanding of the computer as a part of our society.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: None

EDP 101 - Computer Familiarization
This is an introductory course designed to give the novice a basic understanding of data processing and information management in today's computer environment. It deals with the currently most used forms of data processing, basic vocabular tools, and an understanding of the computer as a part of our society.
Course Hours Per Week: Class 1. Quarter Hours Credit 1.
Prerequisite: None

EDP 104 - Data Processing Theory
This is an introductory course designed to introduce the student to the fundamental concepts and operational principles of data processing systems. This course aids the student in developing a basic knowledge of computers and serves as a prerequisite to the detailed study of particular computer problems.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDP 201 - BASIC Language Programming I
This introductory course of programming allows the student to identify and be able to work with an IBM Personal Computer, the processes of developing program for this computer through the use of flow charts, and the BASIC language. The emphasis is placed on obtaining computational results without developing style of production or theory of programming.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

EDP 202 - FORTRAN Language Programming I
This course is designed to develop the student's understanding of FORTRAN programming concepts, coding, and structured programming.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: Any other programming language or permission of instructor

EDP 203 - FORTRAN 77
This course is designed to develop the student's understanding of FORTRAN 77 programming concepts, coding and structured programming. Both business and engineering math applications will be introduced as a part of program design.
Course Hours Per Week: Class 2, Lab 4. Quarter Hours Credit 4.
Prerequisites: EDP 202 or EDP 220 and EDP 221

EDP 210 - BASIC Language Programming II
This course provides the student who is already proficient in the fundamental techniques of BASIC programming with extended command functions and advanced operations. Included are internal and external data files, control formating, multi-dimensional arrays, advanced string variables, subroutines, and an exposure to the Assembler Language.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisites: EDP 201

EDP 211 - Extended BASIC Language Programming
This course is designed to provide a challenging extension of the programming capabilities of those students who have excelled in EDP 201 and EDP 210. Included will be extended commands, statements, functions, extended use of the conditional statements, and error-trapping techniques. The development of single and double precision numbers will be introduced along with various graphic processes. Some work on logical operators will be performed and the merging and chaining of programs will be done.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: EDP 210

EDP 220 - COBOL I
This course introduces the student to coding a simple COBOL program which would accept input from at least two sources and display a printed report. The student is also introduced to terminology which will enable him or her to converse with others and understand a technical manual dealing with COBOL. The reading of more complicated COBOL programs will be introduced.
Course Hours Per Week: Class 2, Lab 4. Quarter Hours Credit 4.
Prerequisite: Any other programming language or permission of instructor

EDP 221 - COBOL II
This course is designed to develop basic COBOL programming understanding into a intermediate skill level. The student will be able to design and code complex COBOL programs generating reports for business applications.
Course Hours Per Week: Class 2, Lab 4. Quarter Hours Credit 4.
Prerequisite: EDP 220

EDP 222 - COBOL III
This course is designed to develop the COBOL student's understanding of developing application programs in conjunction with understanding complex COBOL programs with file handling in a DBMS environment.
Course Hours Per Week: Class 2, Lab 4. Quarter Hours Credit 4.
Prerequisite: EDP 221

EDP 224 - RPG II
This course is a study of a report generator language appropriate for use with small computing system. Students develop program logic and write programs to solve appropriately related sample business problems with special emphasis on application and programming procedures of the smaller business.
Course Hours Per Week: Class 2, Lab 4. Quarter Hours Credit 4.
Prerequisite: EDP 100 and any other programming language or permission of the instructor

EDP 225 - Advanced RPG II
This course is designed to develop the RPG II student's understanding of developing application programs in conjunction with understanding complex RPG I programs with file handling in a business environment.
Course Hours Per Week: Class 2, Lab 4. Quarter Hours Credit 4.
Prerequisite: EDP 224

EDP 230 - PASCAL
This course is designed to introduce students to a disciplined, structured programming language called PASCAL.
Course Hours Per Week: Class 2, Lab 4. Quarter Hours Credit 4.
Prerequisite: None

EDP 250 - BASIC Business Programming
An introductory course in BASIC programming designed for the business student with a knowledge of accounting. The BASIC language is used to program typical business problems. BASIC statements including PRINT, READ, LET, INPUT, GO TO, IF/THEN, and FOR/NEXT are introduced and used in programming exercises.
Course Hours Per Week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisite: BUS 120

EDU 205 - Teaching Methods
This course is designed to teach the skill necessary in preparing lesson plans and using various methods of instructing other persons.
Course Hours Per Week: Class 1, Lab 2. Quarter Hours Credit 2.
Prerequisite: None

EDU 231 - Creative Activities
Individual and group exploration of activities and media for promoting optimal self-expression, aesthetic appreciation, and creativity in young children.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDU 233 - Nutrition
An introductory course in the study of nutrition as it deals with human needs.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

ELC 100 - Electricity I
This course is an introduction to basic theories and principles of electricity. Basic electrical units, Ohm's Law, symbols, power sources and electrical measuring instruments in coordination with basic DC series and parallel resistive circuits will be covered. Practical applications will be stressed. This course is not transferable to the Electronics Engineering or Instrumentation Technology curriculums.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

ELC 101 - Electricity II
This course is a continuation of ELC 100. It will cover an introduction to magnetism, inductance, alternating current, theory, capacitance, reactance phase relationships, AC power and transformers, generators, alternators, and distribution system. Voltage and current regulation along with practical applications will be stressed. This course is not transferable to the Electronics Engineering or Instrumentation Technology curriculums.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: ELC 107 or ELC 100 or proficiency test

ELC 107 - Electricity I
This fundamental course is an introduction to basic theories and principles of electricity. It includes electrical symbols, electrostatics, Ohm's Law, direct current (DC) circuits, power, power sources (DC), circuit theorems, electrical measuring devices, and an introduction to electromagnetism, capacitance and inductance. Practical applications are highly stressed.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Pre/Corequisite: MAT 121

ELC 108 - Electricity II
This course is a continuation of ELC 107. It is an introduction to alternating current theory, sine and pulse wave analysis, inductance, capacitance, reactance, phase relationships, AC power, and transformers. Simple power distribution systems are studied.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: ELC 107
Pre/Corequisite: MAT 122

ELC 109 - Electricity III
This course is a continuation of ELC 108. Topics studied will include RLC circuits, resonance and filters. The practical applications of these concepts are highly stressed.
Course Hours Per week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: ELC 108
Pre/Corequisite: MAT 123

ELN 102 - Electronic Fabrication Techniques
This is a basic course to introduce electronic circuit construction and wiring practices. Topics included are, Soldering/desoldering techniques, component layout, and the interpretation of schematic wiring diagrams. The course is structured to increase the students' manipulative skills using common electrical handtools.
Course Hours Per Week: Lab 2. Quarter Hours Credit 1.
Prerequisite: None

ELN 106 - Electronics I
This fundamental course covers electronic symbols, schematic diagrams, and the functional application of test equipment typically used by technicians. It further introduces the student to the basics of semiconductor physics and two-terminal semiconductor devices.
Course Hours Per Week: Class 2, M. Lab 6. Quarter Hours Credit 4.
Pre/Corequisites: ELC 107, MAT 121

ELN 107 - Electronics II
This course is a continuation of ELN 106. It covers the theory and application of two-terminal semiconductor devices, and bipolar transistor circuits, including biasing methods, small-signal analysis, interstage coupling and feedback.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: ELN 106
Pre/Corequisites: ELC 108, MAT 122

ELN 108 - Electronics III
This course is a continuation of ELN 107. Topics covered are power supplies and regulators, theory and application of Junction and Mos field effect transistors multistage amplifiers, feedback methods, oscillators, multistage circuitry, power amplifiers and feedback.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: ELN 107
Pre/Corequisites: ELC 109, MAT 123

ELN 109 - Electronics IV
This course is a continuation of ELN 108. Topics include unijunction and multijunction switching devices, linear integrated circuits, and optoelectronic devices.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisites: ELC 109, ELN 108, MAT 123

ELN 110 - Introduction to Digital Electronics
This course deals with Boolean Algebra as applied to digital logic and control devices. Principles of Boolean Algebra, Kamaugh mapping, and various number systems will be examined. Practical circuits using industry standard components will be constructed during laboratory sessions.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: ELN 108

ELN 140 - Introduction to Marine Electronics
This course is a continuation of ELC 101 emphasizing marine related applications. The course of study includes an introduction to radar, sonar, communications, sound and electromagnetic wave propagation. Common types of equipment, circuits, testing and measuring devices are studied. In all areas of study, practical applications are stressed.
Course Hours Per Week: Class 4, Lab 2. Quarter Hours Credit 5.
Prerequisite: ELC 101

ELN 202 - Communication Electronics
This course will present basic laws, regulations and operating procedures governing communications in the United States. An in-depth study of solid state device applications in various communication circuits will be conducted. Theory of and special uses for vacuum tubes will be presented.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: ELN 109

ELN 210 - Electronics
This course introduces the student to the basics of semiconductor physics and two-terminal devices, bipolar junction transistor circuits, and typical solid state amplifier circuitry.
Course Hours Per Week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisite: None

ELN 220 - Electronic Systems
This course will cover the operating concepts of numerous electronic systems. Modules or blocks of various circuits, previously studied, are arranged in various combinations to produce complex electronic systems. Each system will be explained and reduced to functions and then to block diagrams. AM, FM and Single Sideband transmitters and receivers, multiplexing, TV transmitters and receivers, pulse-modulated systems, telemetry, navigational systems, sonar and radar will be considered.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4.
Prerequisite: ELN 202

ELN 224 - Measurement and Control I
This course offers a familiarization of instruments utilized in industrial applications. Theory and applications of pressure gauges, vacuum gauges, manometers, dead weight testers and current calibrators will be studied. Associated hardware and software as applied in industrial applications will also be presented.
Course Hours Per Week: Class 2, M. Lab 9. Quarter Hours Credit 5.
Prerequisites: ELN 109, ELN 110, PHY 102

ELN 225 - Measurement and Control II
This course is a study of control theory utilizing electronic and pneumatic instruments. Control loops, selectronic, and pneumatic will be studied, constructed, and calibrated for actual "in-service" conditions.
Course Hours Per Week: Class 2, M. Lab 9. Quarter Hours Credit 5.
Prerequisite: ELN 224

ELN 226 - Measurement and Control III
This course is a continuation of ELN 225, Measurement and Control II. Emphasis will be placed on current techniques in industrial instrumentation, instrument installations and environmental conditions affecting industrial applications of automated systems. Environmental control utilizing electronic and pneumatic systems will be studied.
Course Hours Per Week: Class 2, M. Lab 9. Quarter Hours Credit 5.
Prerequisite: ELN 225

ELN 232 - Electronic Projects, Basic Wiring
This course will introduce wiring and troubleshooting techniques to the student. The student will practice wiring and testing basic electronic circuits. Project selection will be approved by the instructor.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisites: ELN 109, ELC 109

ELN 233 - Analytic Electronic Troubleshooting
This course is designed to follow ELN 232. It is an advanced study of analytic techniques for troubleshooting complex electronic systems.
Course Hours Per Week: M. Lab 6. Quarter Hours Credit 2.
Prerequisite: ELN 232

ELN 234 - Electronic System Design and Construction
This course emphasizes the design, construction and testing of a functional electronic system. Printed circuit design is emphasized and advanced troubleshooting techniques are employed in a design project. Project selection to be approved by the instructor.
Course Hours Per Week: M. Lab 6. Quarter Hours Credit 2.
Prerequisite: ELN 233

ELN 236 - Industrial Field Trips
This course will consist of field trips to local industries and lectures by instrument technicians and engineers who work with the company.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisites: ELN 109, ELN 110

ELN 238 - Antenna and Transmission Line Theory
This course is a study of antenna and transmission line theory. Methods of transferring radio frequency energy from its source to the antenna and radio wave propagation characteristics will be studied.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: ELN 202

ELN 240 - Computer Project (Digital)
This course is designed to provide the student with digital design techniques from concept through construction. Each project selection to be approved by the instructor.
Course Hours Per Week: M. Lab 6. Quarter Hours Credit 2.
Prerequisites: ELN 109, ELN 110

ELN 241 - Digital Principles and Applications
Basic computer and static control logic circuits will be studied. Discreet components will be used to construct logic circuits and investigate voltage levels, propagation delays and switching speed. Boolean principles relating to each type gate will be investigated.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisites: ELN 109, ELN 110

ELN 243 - Computer Electronics
A study of linear electronic circuits directly related to digital computer applications. Video amplifiers, low voltage and high voltage power supplies, deflection circuits and data transmission systems will be introduced.
Course Hours Per Week: M. Lab 6. Quarter Hours Credit 2.
Prerequisite: ELN 109

ELN 244 - Computer Project (Microprocessor)
This course is a continuation of ELN 240. This project will be oriented toward microprocessor applications.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: ELN 240

ELN 245 - Peripheral Devices
This course is an introduction to the theory of operation of digital computer peripheral devices such as printers, plotters, and disk drives. Particular attention will be given to maintenance and preventive maintenance procedures.
Course Hours Per Week: Class 1, M. Lab 6. Quarter Hours Credit 3.
Prerequisite: ELN 243

ELN 247 - Computer Project (Microcomputer)
This course is a continuation of ELN 244. This project will be oriented toward microcomputer applications.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: ELN 244

ELN 249 - Computer Interfacing
This course is designed to present digital computer applications. Topics to be introduced include display multiplexing, I/O control and handshaking, peripheral interface adapters, analog to digital conversion and digital to analog interfacing.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: ELN 251

ELN 250 - Introduction to Microprocessors
This course is designed to present the general concepts of microprocessor organization and structure to the student. Machine and Assembly Language will be introduced.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: ELN 110
Corequisite: ELN 241

ELN 251 - Microprocessors I
An in-depth study of integrated circuit logic devices used in microprocessor applications will be conducted. This study will include logic gates, memory devices, arithmetic logic units and input/output ports.
Course Hours Per Week: Class 2, M. Lab 6. Quarter Hours Credit 4.
Prerequisite: ELN 241

ELN 252 - Microprocessors II
This course will be a continuation of ELN 251. Logic concepts previously studied will be used in an in-depth investigation of various microprocessors. Current uses of microprocessors in industrial applications will be presented. Applications of both Machine and Assembly Languages will be presented.
Course Hours Per Week: Class 2, M. Lab 6. Quarter Hours Credit 4.
Prerequisite: ELN 251

ELN 253 - Electronics in Industry
This course emphasises theory and application of electronic devices used in industrial monitoring and control applications. It will include solid state devices, basic control concepts, control circuits, transducers, variable speed motor controls, and magnetic amplifiers.
Course Hours Per Week: Class 2, M. Lab 6. Quarter Hours Credit 4.
Prerequisites: ELN 109, ELN 241

ELN 254 - Microprocessors, Servocontrols, and Robotics
This course will present theory of, and industrial applications for, servomechanisms and robotics. It will include studies of servomechanisms, digital circuits, microprocessors, data conversion, data communication, optoelectronics, automation, and robotics.
Course Hours Per Week: Class 2, M. Lab 6. Quarter Hours Credit 4.
Prerequisite: ELN 253

ELN 255 - Computer Systems
A study of computer architecture and the operating system giving consideration to the general organization of the computer. Particular attention will be give to troubleshooting procedures used to analyze and facilitate the repair of digital computers. Troubleshooting utilizing hardware and software diagnostic tools will be introduced.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4.
Prerequisites: ELN 245, ELN 251

ENG 090 - Grammar Fundamentals
This course is designed to develop basic grammar and writing skills by reviewing basic rules of grammar with an emphasis on correct usage. It includes coverage of subject/verb agreement, punctuation, spelling, verb forms, pronoun reference and sentence structure. The student will practice simple sentence writing. Laboratory work may be required. Students are required to enroll in ENG 091 upon satisfactory completion of ENG 090.
Course Hours Per Week: Class 5. Institutional Hours Credit 5. (Does not apply toward graduation.)
Prerequisite: None

ENG 091 - Fundamentals of Composition
This course reviews basic rules of grammar and introduces the student to the techniques of writing paragraphs with continued emphasis on sentence structure and paragraph development. Laboratory work may be required.
Course Hours Per Week: Class 5. Institutional Hours Credit 5. (Does not apply toward graduation.)
Prerequisite: ENG 090

ENG 101 - Grammar
The course is designed to aid the student in the improvement of grammatical self-expression. This approach is functional with emphasis on grammar and sentence structure. It is intended to stimulate students in applying the basic principles of English grammar in their day-to-day situations in industry and social life.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

ENG 102 - Composition
This course is designed to help students improve dictionary skills and implement grammar skills learned in ENG 101, as well as to improve spelling, punctuation, and mechanics. Practice is given in writing sentences, paragraphs, and compositions of one to five paragraphs. Emphasis is placed on prewriting; topic sentences; paragraph development techniques; exposition, description, and argumentation; transitions; and conclusions. Students will also work on proofreading and rewriting skills.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: ENG 101

ENG 103 - Report Writing
The fundamentals of English grammar and composition skills learned in ENG 102 are utilized as background for modern report writing. Typical reports using writing techniques and graphic devices are studied. A letter of application and resume are prepared. In addition to using writing and dictionary skills, attention is given to acquainting the student with library materials needed for research. A full-length report is required of each student. The report should relate to the student's specific curriculum or other related topics approved by the instructor.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: ENG 102

ENG 104 - Reading and Composition
English 104 is designed to advance the student's compositional skills through the reaction in writing to various reading materials. The course covers finding main ideas and theses. It devotes attention to reading a variety of materials such as textbooks, newspapers, and imaginative literature. It includes sections on critical reading, telling fact from opinion, generalizing, drawing inferences, and recognizing bias. It concludes with the application of critical skills, reading skills, and study of figurative language to the reading of poems, short stories, and a novel.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: ENG 102 or ENG 106

ENG 105 - Grammar and Composition
This course is designed to aid the student in the improvement of grammatical self-expression. The approach is functional with emphasis on grammar, diction, sentence structure, and punctuation. It is intended to stimulate students to apply the basic principles of English grammar in their day-to-day situations in industry and social life.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: None

ENG 106 - Grammar and Composition
This course advances the student from ENG 105's basic mastery of word and sentence skills to include more advanced forms of grammar and usage in their application to written language. More advanced study, such as the uses of subordination, dictionary skills, spelling, and the use of the library to its fullest is included. The course culminates in the writing of a research paper.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: ENG 105

ENG 204 - Oral Communication
This course considers the basic concepts and principles of oral communication in order to help the student improve his speech communication skills. Emphasis is placed on organization of thoughts, listening, audience analysis, visual and audiovisual aids, voice, diction, pronunciation, projection, and attitude, on the application of techniques to improve speech habits and mannerisms, and on the production of poised, confident, effective oral presentations.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

ENG 206 - Business Communications
This course develops skills in techniques of writing a broad spectrum of business communications, emphasizing the improvement of both form and content.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: ENG 101 or ENG 106

ENG 207 - Poetry Writing
This course will cover instruction in writing poetry. It includes criticism and class discussion of original poems by students, practice in various verse forms, and development of the student's individual abilities.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: ENG 102

FST 106 - Nuclear Radiation Monitoring
This course is designed to provide a basic understanding of radiation and its biological effects, radiation detection procedures and instruments, protective measures, the dangers of transportation accidents involving radioactive materials, and the nuclide disintegration process.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: CHM 114 or equivalent

GEO 101 - Marine Geology
A study of major topographical features of the ocean floor will be undertaken in this course. Included will be coverage of continental drift, sea floor spreading, plate tectonics, seismology, sedimentation, paleontology, mineralogy and petrology as these pertain to the ocean.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: None

GEO 102 - Geology of the Oceans
This is an introductory course in marine geology. Recent discoveries concerning the ocean floor are discussed in this lecture course. Modem theories of plate tectonics and sea floor spreading are presented by lecture and film. Sediment samples, rocks and minerals collected on recent CFCC cruises are shown and discussed as they relate to the modem concepts of marine geology.
Course Hours Per Week: Class 4. Quarter Hours Credit 4.
Prerequisite: None

GGY 135 - Introduction to Physical Geography
This course will cover maps and map projections and their uses as well as analysis of the spatial distribution and character of environmental elements, including climate, land forms, vegetation, and soils.
Course Hours Per Week: Class 4, Lab 4. Quarter Hours Credit 6.
Prerequisite: None

HEA 109 - Medical Ethics, Law, and Economics
This course is designed to acquaint the student with the legal aspects of medical practice acts; the relationship of physician, patient, and professional liabilities; and types of medical practice. Basic principles of medical economics are included.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

HEA 110 - Clinical Practice
A course designed to give the student an overview of the medical assistant's duties at the clinical level. Topics covered include nutrition, microbiology, pharmacology, taking vital signs, medical instruments, assisting with physical exams and office surgery.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

HED 120 - First Aid
This course will introduce students to basic first aid and enable them to successfully cope with the everyday injuries that might occur. Course coverage will range from minor cuts and burns to artificial respiration and the treatment of shock.
Course Hours Per Week: Class 2. Quarter Hours Credit 2.
Prerequisite: None

HED 121 - First Aid and Marine Safety
This course introduces students to first aid procedures which will enable them to successfully cope with the everyday injuries and accidents that may occur in a marine environment. Prevention of these accidents will be discussed and stressed. Students will be taught safety rules utilized on board a vessels as well as at shore stations.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

HIS 101 - Western Civilization I
This course traces the history of Western civilization from its near Eastern, Grecian, and Roman origins through the Middle Ages. It concludes with coverage of the Renaissance and Reformation periods.
Course Hours Per Week: Class 5. Quarter Hours Credits 5.
Prerequisite: None

HIS 102 - Western Civilization II
This course is a continuation of HIS 101. It begins with the Absolutism of the Seventeenth Century and covers the rise of constitutionalism, emerging industrialism and nationalism of the nineteenth century, and concludes with the development of modern day economic and political life.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: HIS 101

INS 215 - Life and Health Insurance
This course is designed to give the prospective insurance salesperson training in the field of life and health insurance. This course includes a study of lif insurance from the following points of view - life exposure, types of life insurance, and life policy provisions. Health insurance will be discussed on the following points: health exposure, types of health insurance, and health policy provisions. Social insurance topics will cover social security, unemployment compensation, and disability insurance. This course is approved b the North Carolina Department of Insurance for licensing.
Course Hours Per Week: Class 4. Quarter Hours Credit 4.
Prerequisite: None

INS 216 - Property and Casualty Insurance
This course is designed to give the prospective insurance salesperson an understanding of property and casualty insurance. It includes a study of property insurance, types of automobile insurance, general liability, commercial fire, homeowners, crime insurance, and government fire and casualty insurance. This course is approved by the North Carolina Department of Insurance for licensing.
Course Hours Per Week: Class 4. Quarter Hours Credit 4.
Prerequisite: None

ISC 113 - Industrial Safety
This course presents fundamental safety philosophy and stresses applications to situations encountered routinely by industrial plant mechanics. The topics to be covered are entering piping systems, routine electrical maintenance, electrical hot work, and electrical test equipment. The student will learn to use safe methods and procedures for accomplishing them.
Course Hours Per Week: Class 2. Quarter Hours Credit 2.
Prerequisite: None

LEG 101 - Introduction to Paralegalism
This course covers the objectives of the paralegal program, the legal vocabulary, the descriptions of various paralegal jobs, professional ethics, and professional organizations.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

LEG 111 - Legal Writing
This course is a continuation of Legal Research and Bibliography where paralegal students, having mastered basic techniques of legal research, now must utilize results of research in the form of legal writing. The course will emphasize those areas of legal writing where a paralegal may be called upon to employ. Basically students will work on legal memorandums, both intraoffice and legal, as well as letter writing and brief writing.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: LEG 132

LEG 113 - Family Law
The purpose of this course is to train paralegals to handle competently separations, divorces, annulments, adoptions, and bastardy proceedings from initial interview through data collection and drafting of instruments, giving notice, filing and serving documents, and setting hearing dates to final disposition.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: LEG 115 or BUS 115

LEG 115 - Commercial Law I
An introduction course for those majoring in the Paralegal Technology curriculum. The course will involve an introduction to the law, a discussion of the law of contracts: personal property and bailment; and agency and employment. The course will include hands-on experience in drafting of contracts.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

LEG 116 - Commercial Law II
A continuation from Commercial Law I for paralegals with emphasis on the Unifor Commercial Code and business organizations. The course will include exposure to commercial instruments and drafting business documents.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: LEG 115 or BUS 115

LEG 117 Torts and Litigation Preparation
This course considers the broad problem of personal injury and disability and the legal response to that law. Negligence, strict liability, intentional torts, rules of civil procedure preparation, pleadings, motions, order, discovery materials and post-judgement remedies are covered in great detail.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: LEG 135

LEG 132 - Legal Research/Bibliography
This course introduces the student to the proper methods of utilizing legal research material. The student will study the preparation of legal memoranda and trial briefs. The course will introduce the student to the law library and how to select and order material for the library.
Course Hours Per Week: Class 4, Lab 6. Quarter Hours Credit 7.
Prerequisite: LEG 115 or BUS 115

LEG 135 - Legal Systems
This course is a study of the jurisdiction of state and federal courts; the acquisition of jurisdiction over parties and subject matter; venue; pleadings and related problems under the North Carolina and Federal Civil Rules of Procedure; real party in interest; splittings of actions; joinder of parties an causes of action; special joinder devices; and forms of pleadings and motions.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

LEG 205 - Constitutional Law
A case study course showing the development of the application of the Federal Constitution to both criminal and civil law and a historic development of Constitutional Law.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: LEG 132

LEG 208 - Administrative Law
This course involves study of various administrative agencies and procedures, including Social Security, Social Services, Veterans Administration, Industrial Commission, and Employment Security Commission.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: LEG 132

LEG 214 - Property I
This course is a study in ownership of interest in land, of land transfers, in whole and in part, absolute and conditional, present and future; of retained powers of ownership; and of the documents and procedures necessary to establish interest in land.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: LEG 115 or BUS 115

LEG 215 - Property II: Title Search
This course includes the study of the preparation of simple contracts for sale of real estate; ordering title search; examination of title; preparing simple titles; ordering title insurance; preparation of deeds, bonds, notes, mortgages and affidavits of title; preparation of settlement sheets and role of judgement and estates in the determination of marketability of real estate title; the study and function of various documents, indices and files on public record in various county offices. Forms for abstracting title information from public records, summaries thereof, and various typical problems and errors which may render a title unmarketable are included.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: LEG 214

LEG 216 - Property III: Loan Closings
This is a continuation of Property II: Title Searching. The course addresses the preparation of closing document in connection with loans. The student is allowed extensive hands-on experience in preparing and drafting all documents relating to conventional, VA, FHA, and other loans.
Course Hours Per Week: Class 1, Lab 2. Quarter Hours Credit 2.
Prerequisite: LEG 215.

LEG 217 - Elements of Criminal Law and Procedure
This is a study of the elements of crimes in North Carolina, of criminalization and punishment, of parties to crimes, and of defenses to crimes. Criminal procedure is examined and a case's progress through the courts traced.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: LEG 115 or BUS 115

LEG 219 - Computerized Legal Research
This course is designed to instruct the student in the use of computer research in the law office. The course will focus on the two primary legal resources, LEXIS and WESTLAW, and instruct the student in the efficient use of these systems.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

LEG 224 - Wills
This course covers the probate and administration of wills. The topics of study include the operation and revocation of wills, descent and distribution in case of intestacy, construction of trust agreements, and the transfer of estate assets.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: None

LEG 230 - Bankruptcy and Collection
This course will introduce the student to the Bankruptcy Law. The student will understand the operation of the bankruptcy court and will be exposed to the techniques of debt collection and attachment.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: LEG 117

LEG 290 - Paralegal Internship
This course is offered in the final quarter of the Paralegal Technology curriculum and is designed as a co-op.
Course Hours Per Week: Co-op Hours 20. Quarter Hours Credit 2.
Prerequisite: Completion of 40 quarter hours of LEG courses with a "C" average or better.

LEG 291 - Paralegal Office Procedures
A guided class discussion of legal principles of office procedures and relating the same to everyday experiences.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: Completion of 40 quarter hours of LEG courses with a "C" average or better.

MAT 090 - Developmental Mathematics for Technical Curricula
This course is designed to provide the student with the fundamental concepts needed to undertake the mathematical sequences in the technical curricula. Topics include operations on whole numbers, prime numbers, multipliers and factors, powers and roots of whole numbers. Also included are operations on fractions and decimals, percentages, operations on the real number line, and geometry fundamentals.
Course Hours Per Week: Class 5. Institutional Hours Credit 5. (Does not apply toward graduation.)
Prerequisite: None

MAT 099 - Pre-Admission Algebra
Fundamentals of algebra are covered. The course is designed to prepare the applicant, who has not taken algebra in high school, for a smooth transition into the required technical mathematics sequence. Topics include arithmetic review, signed numbers, algebraic expressions, and simple linear equations.
Course Hours Per Week: Class 4. Institutional Hours Credit 4. (Does not apply toward graduation.)
Prerequisite: None

MAT 110 - Business Mathematics
This course reviews the fundamental mathematical operations and their application to business problems. Topics covered include the fundamentals of problem-solving, computing with whole numbers and decimals, common and complex fractions, percentage, and interest.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

MAT 121 - Technical Mathematics
This introductory algebra course is the first in a three-course sequence. The topics of study are operations with real numbers, introduction to exponents and radicals, operations with algebraic expressions, algebraic fractions, and solving first order equations.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

MAT 122 - Technical Mathematics
This course is the second in a three-course sequence. The topics of study are variation, graphing of functions, trigonometry of the right triangle, vectors, exponents and radicals, and exponential and logarithmic functions. Application of theses topics in technical areas of study will be stressed.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: MAT 121 or equivalent

MAT 123 - Technical Mathematics
This course is the third in a three-course sequence. The topics of study are systems of equations, in quadratic equations, trigonometric graphs and polar coordinates, trigonometric formulas and equations, and solving oblique triangles.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: MAT 122 or equivalent

MAT 130 - Advanced Business Mathematics
This course is a study of pertinent uses of mathematics in the field of business. The topics covered include payrolls, price marking, depreciation, distribution of profits, compound interest, and amortization.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: MAT 110

MAT 201 - Technical Mathematics
The fundamental concepts of analytic geometry, differential, and integral calculus are introduced. Topics included are graphing techniques, geometric an algebraic interpretation of the derivative, differentials, rate of change, integrals, and basic integration techniques. Application of these concepts to practical situations is stressed.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: MAT 123 or equivalent

MAT 202 - Technical Mathematics
Applications of integration in velocity and acceleration problems, areas between curves, volumes, and work by a variable force are considered. Derivatives of trigonometric and inverse trigonometric functions and the application of these derivatives to various physical problems are studied. Derivatives of exponential and logarithmic functions and their applications are considered. Integration by logarithmic and trigonometric forms are studied as are integration by parts and by the use of tables.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: MAT 201

MAT 211 - Basic Statistics
This introductory course in statistics allows the student to identify and be able to work with statistical descriptions, probability, random variables and probability distributions, special distributions, sampling distributions, estimations of population proportion, test concerning population proportions, inferences concerning population mean and additional topics selected from the following: inferences concerning differences of two population means, inferences concerning population variances, Chi-square, regression and correlation, analysis of variance, nonparametric methods, survey sampling, quality control, Bayesian methods, and decision theory.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: MAT 122

MEC 100 - Special Project
This elective course allows the student to obtain new skills and/or to further practice acquired skills on an individual basis by completing an independent student project directed by a faculty member. The nature of the project will be determined by the career interests and aptitudes of the student.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: Permission of the instructor upon completion of three quarters in major field of study.

MEC 101 - Special Project
This elective course allows the student to obtain new skills and/or to further practice acquired skills on an individual basis by completing an independent student project directed by a faculty member. The nature of the project will be determined by the career interests and aptitudes of the student.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: Permission of the instructor upon completion of three quarters in major field of study.

MEC 102 - Special Project
This elective course allows the student to obtain new skills and/or to further practice acquired skills on an individual basis by completing an independent student project directed by a faculty member. The nature of the project will be determined by the career interests and aptitudes of the student.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: Permission of the instructor upon completion of three quarters in major field of study.

MEC 111 - Industrial Mechanics I
Major areas covered by this course are tools, fasteners, and engineering drawings. Proper care and use of hand tools, power tools, and precision measuring tools are stressed with special emphasis on hand safety and tool hazards. Reading and interpretation of engineering drawings and sketches are a vital part of this course. Instruction in the selection and installation of fasteners is also important in establishing a broad base of mechanical knowledge.
Course Hours Per Week: Class 5, Lab 2. Quarter Hours Credit 6.
Prerequisite: None

MEC 112 - Industrial Mechanics II
This diversified course covers many aspects of an individual mechanic's job: rigging, equipment alignment, and bearings. Geometric relationships and basic math are essential parts of this course. Lubrication types and methods of application are included in the study of bearings. A practical approach to rigging is used to teach students how to move heavy equipment with a variety of slings, hoists, and jacks.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: MEC 111

MEC 115 - Industrial Pipefitting I
This course is an introduction to pipefitting with emphasis on fabrication and installation of threaded pipe. Topics covered are piping materials and tools, threaded pipe fabrication and installation, conduit fabrication and installation, gaskets and packing. Proper use of hand and power tools will be practiced during all phases of this course. Students will fabricate different pipe and conduit sections based on their own field measurements.
Course Hours Per Week: Class 1, Lab 2. Quarter Hours Credit 2.
Prerequisite: None

MEC 116 - Industrial Pipefitting II
This course will teach the industrial mechanic to maintain and repair existing piping systems. The student must be able to identify defective parts of a pipe system, choose suitable replacement parts, shut down the energized system, and repair it. These systems are to be flanged, threaded, or soldered. A working knowledge of system components such as valves, traps, strainers, filters, and relief valves will be achieved.
Course Hours Per Week: Class 4, Lab 2. Quarter Hours Credit 5.
Prerequisite: MEC 115

MEC 118 - Introduction to Manufacturing Engineeering
This course is designed to give the student an understanding of the basic sciences and techniques used in industrial manufacturing engineering. It includes coverage of basic parts design, materials application to the part and systems engineering or processes used to make the parts. It stresses the interaction of all three to produce the part at an optimum cost.
Course Hours Per Week: Class 4. Quarter Hours Credit 4.
Prerequisite: None

MEC 121 - Industrial Methods I
Students will be introduced to basic shop hand tools and instructed in there proper use and care. The drill press and its accessories will be demonstrated and the student will be required to complete shop projects as assigned by the instructor. Safety will be stressed throughout the course.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: None

MEC 122 - Industrial Methods II
The lathe, milling machine, and all accessory tools will be introduced to the student. Emphasis will be placed on the machines limits and abilities. Safety rules will be stressed for each machine. Appropriate projects will be assigned by the instructor.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: MEC 121

MEC 123 - Industrial Methods III
Previous instructions and skills will be applied to a project which will allow the student an opportunity to test their shop knowledge. All safety rules will be a part of shop procedures.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 3.
Prerequisite: MEC 122

MEC 205 - Strength of Materials
This course is a continuation of PHY 106, Applied Mechanics. It is the study of stress and strain as they relate to structural design. The areas of force analysis of structures, friction, equilibrium, stress, and strain are covered in as much detail as time will permit.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisites: MAT 123, PHY 106

MEC 209 - Introduction to Metallurgy
This is an introductory course which will describe the properties of ferrous and non-ferrous metals as they apply to industrial applications. Metallurgical theory and practice will be studied to include the physical structure and composition of steel, the making, shaping, and treatment of steel and alloy steel as well as alloys of the common non-ferrous metals to include light metals, copper, nickel and the refractory metals.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: None

MEC 216 - Industrial Materials
Proper knowledge of all types of industrial materials is essential to successful decision-making and problem-solving. This introductory course investigates the basic materials in industry. Electrical and physical properties of materials, mechanical characteristics of materials, water and steam, industrial gases, ceramic materials, cements and concretes, and metals are studied.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

MEC 235 - Hydraulics and Pneumatics
In this course the student will learn the basic ideas of hydraulic and pneumatic systems. In so doing the student will develop an understanding of various hydraulic and pneumatic controls and their relationships and function in circuits. Symbols and conventional practices will be stressed.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4.
Prerequisite: PHY 102 or PHY 105

MEC 240 - Radiographic Testing
A survey of the principles governing the radiographic testing process and the types of parts commonly inspected with radiation; routine procedures used in accomplishing the test, understanding the requirement for a specific technique, and safety precautions pertinent to radiation hazards will be stressed.
Course Hours Per Week: Class 4. Quarter Hours Credit 4.
Prerequisite: None

MEC 246 - NDT Surface Testing, Magnetic Particle, and Liquid Penetrant
This is a survey of the liquid penetrant process used in manufacturing, inspection, and testing procedures. An introduction to the principles governing the magnetic particle testing and inspection process, it identifies types of parts which are commonly tested by magnetic lines of force, and explores advantages and disadvantages of surface and subsurface indications.
Course Hours Per Week: Class 4. Quarter Hours Credit 4.
Prerequisite: None (General high school level education or industrial training desirable.)

MEC 248 - Ultrasonic Testing
In this course the principles of ultrasonic testing and inspection process cover the type of parts commonly tested with ultrasonsics. Procedures for specific tests, and the advantages and disadvantages will be studied.
Course Hours Per Week: Class 4. Quarter Hours Credit 4.
Prerequisite: None (General high school level education or industrial training desirable.)

MET 101 - Introduction to Meteorology
This course is an introductory study of the composition and structure of the earth's atmosphere and the physical forces that influence weather. Included is the identification and interpretation of observed weather phenomena.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

MGT 104 - The Art of Motivating People
An overview of the theories and principles dealing with motivation in terms of self and group activity. Class participation is used to bridge the gap between theoretical and actual experience for motivation processes.
Course Hours Per Week: Class 2. Quarter Hours Credit 2.
Prerequisite: None

MGT 105 - Human Relations and Communications
A study in the basic principles of human behavior in terms of the individual, working with others, and a career as related to the business environment.
Course Hours Per Week: Class 2. Quarter Hours Credit 2.
Prerequisite: None

MSC 101 - Navigation I
This course introduces students to basic marine piloting techniques using charts, navigational aids, buoys, markers, rules of the road, light and signals.
Course Hours Per Week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisite: None

MSC 102 - Navigation II
This is a continuation of MSC 101 introducing students to navigational publications and electronic navigational aids. Proper use of electronic equipment (radar, radio direction finding, loran, sonic echo ranging and recording, and the gyrocompass) will be stressed. As time permits, classroom instruction may include tides, tidal current effects, danger angles, and soundings.
Course Hours Per Week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisite: MSC 101

MSC 108 - Oceanographic Instrumentation
Oceanographic Instrumentation will be introduced via lecture, demonstration, and student operation. Emphasis will be placed on the use, maintenance, calibration, and repair of general survey instruments.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

MSC 109 - Oceanography I
This course provides students with a general description of the oceans, their geography, geology, chemistry, and physics.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

MSC 110 - Oceanography II
This course provides students with a general description of air-sea interactions, wave, tide and ocean current phenomena, and coastal dynamics.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

MSC 111 - Net Construction Methods
This course introduces students to all types of fish-catching methods available to the commercial and scientific fisherman. Students will be instructed to the basic aspects of rigging, rope splicing, various practical knots, and the kinds of hardware used in biological sampling operations. The basics of biological net construction and repair also will be covered.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MSC 112 - Biological Net Construction I
This course offers students further instruction and practical experience in the mending and patching of various types of gear as well as additional experience in various aspects of marlinspike seamanship. Students will receive instruction on the various types of webbing available as well as construction techniques for various types of entrapment and entanglement gear. Ordering, sizing, and practical applications of all gear constructed will be explained.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MSC 113 - Biological Net Construction II
This course offers students further instruction in the design and construction of some of the more complex sampling gear, including biological seines, trawls, and cast nets. Taper cuts and sewing techniques will be introduced as well as computer-assisted design of various equipment. Practical applications of all gear constructed will be explained.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: MSC 112

MSC 114 - Biological Sampling Methods
This course offers students further experience utilizing all the various skills and techniques taught in the prerequisite courses. This course will also include the proper care and maintenance of all equipment used, the proper recording of all biological data as well as theories and uses involved in the compilation of raw biological data.
Course Hours Per Week: Lab 4. Quarter Hours Credit 2.
Prerequisite: MSC 113

MSC 115 - Construction of Gill Nets
This course is designed to teach students basic construction methods for gill nets used in the fishing industry.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MSC 117 - Practical Experience I
This course offers students an introduction to various measuring devices and their uses, various hand and hand power tools and their uses, as well as experience in the basic design, construction, and maintenance of marine related materials.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: None

MSC 118 - Practical Experience II
This course introduces students to various stationary power tools and their uses. Further experience will be gained with the use of hand and portable power tools, as well as the basic design, construction, and maintenance of marine-related equipment.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: MSC 117

MSC 119 - Practical Experience III
This course offers students practical experience in the photographic recording of data as it relates to past biological, chemical, and instrumentation studies. Further experience is also offered in the utilization of various construction projects.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: PHO 110

MSC 132 - Power Boat Operations and Seamanship
This course introduces students to the various aspects of safe, skillful, and seamanlike operation of power boats. Students will operate and practice docking small craft. It also introduces students to the various skills, duties, and nomenclature required of able-bodied seamen.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MSC 141, 142, 143 - Marine Projects
Students will participate in a Marine Project that may or may not require training aboard a small craft, but will require participation in field work or tours related to knowledge gained in regular classes.
Course Hours Per Course: 33 Hours. Quarter Hours Credit 1.
Corequisite: 12 credit hours minimum enrollment in other Marine Technology curriculum courses.

MSC 202 - Data Processing I
This course introduces students to the handling and processing of oceanographic data. Temperature, salinity, and depth data are used to demonstrate standard methods of recording and reducing oceanographic data.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: MAT 123

MSC 205 - Data Processing II
This course is a continuation of MSC 202 and will emphasize computer application in the collection, handling, reduction, and display of oceanographic temperature, salinity, and depth data.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisites: EDP 201, MSC 202 or permission of instructor

MSC 206 - Estuarine Survey
A course in which emphasis is placed on field sampling and measurements, laboratory analysis, data reduction, and data representation. This course is designed to provide an opportunity for soon-to-be graduating students to apply in a comprehensive, challenging, and significant manner what has been learned during the past seven quarters. A formal report will be required.
Course Hours Per Week: Class 2, Lab 4, M. Lab 3. Quarter Hours Credit 5.
Prerequisites: CHM 109, CHM 224, MSC 108

MSC 218 - Eddy Current Testing
Principles of eddy current testing and inspection processes will be covered. Emphasis will be placed on routine procedures involved; selection of a specific technique; limitations, advantages, and disadvantages of this test; and interpreting frequency meter indication.
Course Hours Per Week: Class 2. Quarter Hours Credit 2.
Prerequisite: None

MUS 115 - Survey of Music Literature
This course is designed to increase the student's knowledge and appreciation of music; technical knowledge of music not required.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

PED 101 - Foundations of Physical Activity
A study of immediate and long term effects of physical activity and the establishment of individualized programs for acquiring and maintaining physical fitness.
Course Hours Per Week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisite: None

PHO 110 - Introduction to Photography
This course is an introductory course covering the basic skills required for black and white photography, the operation of the camera, the creation and content of a good photograph, processing film, making prints, and preparing photographs for display.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

PHO 120 - Photography
This course is designed to introduce the student to photographic applications in a variety of trade and technical fields. The workings of a camera will be explained. Choosing the proper lenses and films will be discussed as well as various compositional theories. Instruction will also be given on processing black and white film, making black and white print and and how to prepare photographs for display.
Course Hours Per Week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisite: None

PHO 200 - Intermediate Photography
This course will expand upon the applications of black and white photography. In addition, exposure control, film characteristics, Archival Processing, storing of negatives and prints, and artificial and natural lighting techniques will be discussed.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: PHO 110

PHO 210 - Advanced Photography
This course covers black and white photography in greater depth and instruction in special techniques. Special effects, specialized fields of technical photography such as micro, macro, artificial lighting, and color slide preparation and presentation.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: PHO 110

PHY 100 - Introductory Physics
This fundamental course is a prerequisite for PHY 103, PHY 104, PHY 105, or PHY 106. The student is introduced to the units used in measurements, and to the following concepts applied to linear motion: force, work, and power. Emphasis is placed on the universal applicability of these concepts to other more specialized programs of study.
Course Hours Per Week: Class 4, Lab 2. Quarter Hours Credit 5.
Prerequisite: It is recommended that MAT 121 be taken prior to enrolling in this course or to be taken concurrently with this course.

PHY 101 - Physics: Properties of Matter
This is an introductory course which describes some basic physical properties of matter in the solid, liquid, and gaseous states. Topics discussed are: units of measurement and unit conversions; density and hydrostatic pressure in liquids, surface tension; Hooke's law and the elasticity of solids and liquids; heat and temperature measurement; and the ideal gas law.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: MAT 121

PHY 102 - Physics: Work, Energy, and Power
This course is the second part of the introductory course and is designed to follow PHY 101. Topics discussed are velocity and acceleration of objects, Newton's laws of motion, vector calculations, work, energy, power, and rotary motion.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisites: PHY 101, MAT 121
Pre/Corequisite: MAT 122

PHY 103 - Physics: Electricity
This course is an introduction to the physical principles of electrical phenomena. Topics discussed include electrostatics, electric current flow and Ohm's law, magnetism and forces caused by electric currents, induced electric currents, alternating current devices, and simple electronic DC power supply circuits.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisites: MAT 122, PHY 100 or PHY 101

PHY 104 - Physics: Light and Sound
This course is an introduction to the description of optical and acoustic devices. Topics included are wave motion and resonance, sound measurements and human hearing, the Doppler effect, illumination and color, optical elements (lenses and mirrors), and some basic principles of physical optics.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisites: MAT 123, PHY 100 or PHY 101

PHY 105 - Physics: Heat and Fluids
This course is an introduction to heat energy and its effects on various materials. The course content is designed to provide the fundamental concepts necessary to describe heat transfer processes involving moving fluids. Topics included are pressure in liquids, laminar and turbulent flow of fluids, Bernoulli's principle, the ideal gas law, temperature and heat energy, and heat transfer via moving fluids.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: PHY 100 or PHY 101

PHY 106 - Applied Mechanics
This course is an introduction to statics. Some topics included are the equilibrium of two and three dimensional force systems, centroid and center of gravity, and the analysis of trusses and frames.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisites: MAT 123, PHY 100 or PHY 102

PHY 225 - Forensic Physics
This course is a survey of a variety of topics from technical physics which are useful in understanding phenomena experienced and equipment used in the criminal justice field. The course can be divided into three principal areas of study - ray optics and converging lenses, simple electric circuits using relays to achieve the AND and OR logic functions, linear motion and kinetic energy. Particular attention is given to the student's understanding of the physical principles of operation of devices such as cameras, telescopes, and alarm circuits.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: MAT 121

P&R 103 - Introduction to Religion
This course covers religion as a field of study, major modes of religious expression, chief issues in religious thought and experience, the search for method since the Enlightenment, and contemporary developments.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

PLS 101 - American National Government
This course focuses upon basic principles, institutions, and functions such as federalism, separation of powers, civil liberties, and judicial review.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

PLS 103 - State and Local Government
This course is a study of state and local governments. Topics such as taxation revenues, and city council proceedings are included. The legislative, executive, and judicial branches of state government will be discussed.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

PME 101 - Marine Engines I
This is a course that introduces students to the basic construction of internal combustion engines of the reciprocating type. Basic maintenance and repair of related equipment including starters, water pumps, and generators will be covered. Outboard motors will be the primary type of engine studied in this course.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

PME 102 - Marine Engines II
This course is a continuation of PME 101. Theory of operation, breakdown and overhaul of small engines, water pumps, and accessories will be emphasized. Maintenance on all school inboard and outboard engines will be conducted as an integral part of the course.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: PME 101

PME 105 - Outboard Motor Repair
This course introduces students to the fundamentals of outboard engine maintenance and repair. It will include shop exercises in troubleshooting, engine overhaul, lower unit repair, and control repair.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

PME 111 - Emission Systems Diagnosis
The course provides the practicing technician with suggested diagnostic procedures used in checking motor vehicle emission. In addition, a considerabl portion of the course is aimed toward recommended manufacturers' procedures for critical engine system adjustments. The course is designed to associate emissions failures or excessive HC (hydrocarbons) and/or CO (carbon monoxide) emission with infrared analyzer readings. The course allows a progression of failure detection from the most likely causes (and often the least expensive to repair) to the more complex causes. It also includes recognized tune-up and troubleshooting procedures. It is essential that proper (recommended) manufacturers' procedures and specifications for adjustment are carried over and applied to everyday tune-up activities.
Course Hours Per Week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisite: None

PME 112 - Marine Diesel and Gasoline Engines
This is a course introducing the student to the basic principles of operation of two- and four-cycle internal combustion marine engines. Methods of testing engine performance will be demonstrated to include maintenance and servicing of fuel systems, exhaust systems, cooling systems and lubrication systems.
Emphasis will be given to methods of diagnostic testing, repairing, proper maintenance and preservation of marine engines.
Course Hours Per week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisite: None

PSY 211 - Stress Management
A course designed to create in the individual an understanding of the nature of stress and to provide the techniques for mastery over stress.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

PSY 217 - Introduction to Psychology
This is a course designed to cover the basic principles of psychology that will be of assistance to the student in developing greater self-understanding and in improving interpersonal relationships on both individual and job-related bases. The content of the course includes the following: basic terminology, methods of gathering psychological data, psychology as a science, current schools of thought, learning theory and memory, personality development, stress and adjustment, and abnormal behavior.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

SHI 101, 102, 103, 104, 105 - Ocean Survey
All full-time curriculum students musts receive this training aboard a research vessel. During which time, they will be rotated on various assignments and expected to apply theory and practice learned in regular classes. In cases where Ocean Survey is not available, Marine Projects will be substituted.
Course Hours Per Course: 44-88 Hours. Quarter Hours Credit 2.
Corequisite: 12 credit hours minimum enrollment in other Marine Technology curriculum courses.

SOC 102 - Principles of Sociology
This is an introductory course designed to cover the basic principles of sociology and to provide an understanding of culture, social structure, socialization, collective behavior, deviance and social control, stratification and social mobility. Emphasis is placed on the scientific study of group behavior and the effect of social life on personality and behavioral development.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

SOC 206 - American Institutions
This course is a study of the effect of American social, economic, political, religious, and educational institutions upon the individual's role as a citizen and a worker. The course dwells upon current local, national, and global problems in the light of our political and economic heritage.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

SOC 212 - Sociology of Deviant Behavior
This course will focus on the various sociological theories of deviant behavior and the methodologies of reformative actions. Areas covered may include substance abuse, sexual deviance, violence, property crimes, and mental disorders.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: SOC 102

SOC 217 - Juvenile Delinquency
This course is designed to analyze the causes, treatment, and prevention of delinquency. Emphasis is placed on the sociological and psychological parameters affecting adolescent development which may contribute to delinquency. Historical and contemporary points of view are compared.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

SOC 219 - The Family in Society
This course will deal with the dynamic nature of the family institution. It is intended to build on the sociological foundation established in SOC 102. The primary expectation is that the student examine family systems and issues beyond his/her own experience and critique them in an objective and articulate manner. A variety of resources will be drawn upon to integrate the classroom theory with the reality in the community.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: SOC 102

WLD 134 - Marine Welding
There will be demonstrations by the instructor and practice by students in the welding shop. Students should become proficient in welding stringer beads from the flat position to the vertical position in the time allotted during the quarter. Safe and correct methods of assembling and operating the welding equipment, the correct use of flame cutting and arc cutting equipment applicabl to mechanical repair work will be demonstrated.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

TRADE CURRICULA

In North Carolina, as well as throughout the nation, the demand for skilled tradesmen is at an all-time high. Hardly a day passes that the College does not have at least one call from industry looking for prospective employees. Graduates of the trade programs sometimes have as many as four or five offers of employment upon graduation.

Students in the skilled trade programs are trained in shops similar to those of private industries. The shops contain testing and measuring instruments, tools, and equipment of the same size and types as found in private firms. The facilities make possible practical instruction which is essential to the preparation of skilled workers needed by today's modern industries. Students in these trade programs spend twenty-five to thirty hours per week in school; this time is divided between classroom studies and practical shop work.

Skilled craftsmanship in the occupation, appropriate educational background and leadership ability are the bases for instruction selection in these trade courses.

A diploma is awarded to those students who satisfactorily complete the full-time trade program. To be eligible for the diploma, students must maintain satisfactory grades in all shop, class work, and maintain an overall grade point average of 2.00.

AUTHORIZED PROGRAMS

One year (12 months) training courses are offered in the following skilled trades:

Air Conditioning, Heating, and Refrigeration
Automotive Mechanics
Boat Building
Child Care Worker
Commercial Fishing
Industrial Electricity
Industrial Maintenance
Light Construction
Machinist
Marine and Diesel Mechanics
Marine Maintenance and Related Occupations
Practical Nursing
Welding

AIR CONDITIONING, HEATING AND REFRIGERATION

The Air Conditioning, Heating, and Refrigeration curriculum develops an understanding of the basic principles involved in the construction, installation, operation and maintenance of climate control equipment. Courses in blueprint reading, duct construction, welding, circuits and controls, math, science and general education are included to help provide supporting skills necessary for the mechanic to function successfully in the trade.

The air conditioning, heating, and refrigeration mechanic installs, maintains, services, and repairs environmental control systems in residences, department and food stores, office buildings, industries, restaurants, institutions, and commercial establishments. Job opportunities exist with companies that specialize in air conditioning, heating and commercial refrigeration installation and service. The graduate should be able to assist in installing mechanical equipment, duct work, and electrical controls necessary in residential and commercial projects. With experience, the graduate should be able to service various air conditioning, heating, and refrigeration components; troubleshoot systems; and provide preventive maintenance required by mechanical equipment. This person may be employed in areas of maintenance, installation, sales, and service in the field of air conditioning, heating and cooling.

		HOURS PER WEEK			
		Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER					
AHR 1116	Oil Burner Installation and Service	4	0	6	6
AHR 1121	Principles of Refrigeration - Part I	2	0	3	3
DFT 1114	Blueprint Reading	2	0	0	2
ELC 1102	Applied Electricity - Part I	3	0	0	3
MAT 1101	Trade Mathematics	5	0	0	5
		16	0	9	19
SECOND QUARTER					
AHR 1117	Gas Burners, Electric Heat and Liquid Heat Applications	5	2	0	6
AHR 1122	Principles of Refrigeration - Part II	3	0	6	5
DFT 1116	Blueprint Reading: Air Conditioning	1	0	3	2
EGY 1101	Introduction to Solar Energy Systems	1	2	0	2
ELC 1103	Applied Electricity - Part II	2	0	0	2
		12	4	9	17
THIRD QUARTER					
AHR 1123	Principles of Air Conditioning	3	0	6	5
AHR 1124	Air Conditioning Servicing	2	0	9	5
ENG 1101	Communication Skills	2	0	0	2
PHY 1101	Applied Science	3	2	0	4
		10	2	15	16

FOURTH QUARTER				
AHR 1109 Job Planning and Estimating	2	0	0	2
AHR 1126 All Year Comfort Systems	4	2	6	7
AHR 1128 Automatic Controls	3	0	6	5
PSY 1101 Human Relations	3	0	0	3
	12	2	12	17

MINI COURSES — When mini courses AHR 1116-A and AHR 1116-B are completed, full credit will be given for AHR 1116.

AHR 1116-A Oil Burner Installation and Service	2	0	3	3
AHR 1116-B Oil Burner Installation and Service	2	0	3	3

See pages 123 to 152 for course descriptions.

AUTOMOTIVE MECHANICS

The Automotive Mechanics curriculum provides a training program for developing basic knowledge and skills needed to inspect, diagnose, repair and adjust automotive vehicles. Manual skills are developed in practical shop work; technical understanding of the operating principles involved in the modern automobile are taught through class assignments, discussions and shop practices.

Automobile mechanics maintain and repair mechanical, electrical and body parts of passenger cars, trucks and buses. In some communities and rural areas they also service tractors or marine engines and other gasoline-powered equipment. Mechaanics inspect and test equipment to determine the causes of faulty operation. They repair or replace defective parts to restore the vehicle or machine to proper operating condition and use shop manuals and other technical publications as references for technical data. Persons completing this curriculum may find employment with franchised automobile dealers, independent garages, or may start their own business.

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER				
AUT 1120 Automotive Analysis	2	0	3	3
ENG 1101 Communication Skills	2	0	0	2
MAT 1101 Trade Mathematics	5	0	0	5
PME 1101 Internal Combustion Engines	3	0	15	8
	12	0	18	18

AUTOMOTIVE MECHANICS (continued)

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
SECOND QUARTER				
AUT 1126 Schematics and Diagrams: Automotive	0	0	3	1
AUT 1129 Emission Systems: Automotive	2	0	3	3
ENG 1102 Communication Skills	2	0	0	2
PME 1102 Engine Electrical and Fuel Systems	5	0	15	10
	9	0	21	16
THIRD QUARTER				
AHR 1100 Automotive Air Conditioning	1	0	3	2
AUT 1121 Braking Systems	3	0	3	4
AUT 1123 Automotive Chassis and Suspension Systems	3	0	9	6
PHY 1101 Applied Science	3	2	0	4
PSY 1101 Human Relations	3	0	0	3
	13	2	15	19
FOURTH QUARTER				
AUT 1124 Automotive Power-Train Systems	3	0	9	6
AUT 1125 Automotive Servicing	3	0	9	6
BUS 1103 Small Business Operations	3	0	0	3
WLD 1102 Basic Welding	0	0	3	1
	9	0	21	16

MINI COURSES — When mini courses PME 1102-A, PME 1102-B, PME 1102 -C, and PME 1102-D are completed, full credit will be given for PME 1102.

PME 1102-A Engine Electrical and Fuel Systems	1	0	3	2
PME 1102-B Engine Electrical and Fuel Systems	1	0	3	2
PME 1102-C Engine Electrical and Fuel Systems	1	0	3	2
PME 1102-D Engine Electrical and Fuel Systems	2	0	6	4

See pages 123 to 152 for course descriptions.

BOAT BUILDING

The Boat Building curriculum prepares individuals to build and repair boats made primarily of wood and/or fiberglass construction. The curriculum includes instruction in mathematics, blueprint reading, hand and machine woodworking tools, marine fiberglassing, and welding.

The graduate will be qualified for entry into a boat building and repair industry that specializes in constructing wood type vessels or may work in a firm that specializes in maintenance and repair of boats.

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER				
DFT 1127 Marine Drafting	3	0	6	5
MAT 1101 Trade Mathematics	5	0	0	5
MSC 1110 Boat Building I	5	0	12	9
	13	0	18	19
SECOND QUARTER				
CAR 1110 Modern Yacht Joiner Practices I	3	0	6	5
ELC 1101 Practical Marine Electricity	2	0	3	3
MSC 1111 Boat Building II	4	0	12	8
	9	0	21	16
THIRD QUARTER				
CAR 1111 Modern Yacht Joiner Practices II	2	0	6	4
ENG 1101 Communication Skills	2	0	0	2
MSC 1112 Boat Building III	3	0	12	7
PHY 1101 Applied Science	3	2	0	4
	10	2	18	17
FOURTH QUARTER				
CAR 1114 Yacht Repair and Renovation	4	0	9	7
FBG 1101 Fiberglass Mold Making	4	0	9	7
WLD 1101 Basic Welding	1	0	3	2
	9	0	21	16

See pages 123 to 152 for course descriptions.

CHILD CARE WORKER

The Child Care Worker curriculum prepares individuals to work as assistants with early childhood specialists in day-care centers, nursery schools, kindergartens, child development centers, hospitals, institutions, camps and recreation centers. This curriculum provides course work to meet the requirements for entry level employment and upgrading or retraining of staff in child care facilities.

Instruction includes theory and application in child care, growth and development of children, behavior patterns of children, health practices and how to deal with the emotional and physical problems of children.

As of January 1, 1987 - In order to be employable in a day-care center in North Carolina, you must be a high school graduate or have obtained you GED certificate.

CHILD CARE WORKER

		HOURS PER WEEK			
		Class	Lab	Prac-ticum	Quarter Hours Credit
REQUIRED COURSES					
EDU 1006	Language Arts in Early Childhood	3	0	0	3
EDU 1009	Art in the Early Childhood Program	1	2	10	3
EDU 1022	Mathematics, Science, and Social Studies for Young Children	3	0	0	3
EDU 1101	Child Growth and Development (Infant-Toddler 0-36 months)	1	2	10	3
EDU 1102	Child Growth and Development (Preschool 2-5)	3	0	0	3
EDU 1103	Music and Integrated Activities	1	2	0	2
EDU 1105	Health, Safety, and Nutrition of the Young Child	3	0	0	3
EDU 1106	Nutrition/Cooking Experience	3	0	0	3
EDU 1111	Communicating Effectively with Young Children	3	0	0	3
EDU 1113	Early Childhood Curriculum Planning: Social Studies and Special Holidays	3	0	0	3
EDU 1115	Early Childhood Curriculum Planning: Construction, Physical, and Blocks	3	0	0	3
EDU 1116	Early Childhood Curriculum Planning: Cognitive	3	0	0	3
EDU 1118	Operation of Child Care Programs	3	0	0	3
EDU 1122	Guiding Children's Behavior	3	0	0	3
EDU 1125	Working with Parents	3	0	0	3
EDU 1130	Introduction to Preschool Education	3	0	0	3
EDU 1138	Program Planning for Infants and Toddlers	1	2	10	3
EDU 1148	Infant-Toddler Care	1	2	0	2
EDU 1203	Exceptional Children	3	0	0	3
ENG 1101	Communication Skills	2	0	0	2
ENG 1102	Communication Skills	2	0	0	2
HEA 1119	First Aid	2	0	0	2
PSY 1101	Human Relations	3	0	0	3
SOC 1112	Families in American Culture	3	0	0	3
		59	10	30	67

See pages 123 to 152 for course descriptions.

COMMERCIAL FISHING

The Primary objective of the Commercial Fishing curriculum is to develop the student's ability to function effectively in any task assigned as a member of a commercial fishing crew. The curriculum emphasizes the development of commercial fishermen through practical, hands-on application an all phases of this highly skilled trade. Students learn how to maintain and repair all equipment used aboard the fishing vessel and the various seamanship skills which are put into actual practice at sea.

Employment opportunities are available to the graduates of the curriculum and the various commercial fishing enterprises along the eastern seaboards of the United States.

		HOURS PER WEEK			
		Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER					
BIO 1101	Introduction to Marine Biology	5	0	0	5
MRO 1101	Rules of the Road and Piloting	1	6	0	4
MRO 1106	Practical Marine Engineering I	1	0	3	2
MRO 1139	Rigging and Seamanship	1	0	3	2
MSC 1114	Marine Fishery Science and Seafood Handling	2	2	0	3
WLD 1106	Welding and Burning I	0	0	6	2
***	Fishing Operations at Sea	*	*	*	*
		10	8	12	18
SECOND QUARTER					
CFT 1101	Fishing Operations I	1	0	9	4
CFT 1111	Net Making and Repair I	0	2	0	1
ELC 1106	Practical Marine Electricity I	3	0	3	4
ENG 1101	Communication Skills	2	0	0	2
MRO 1102	Electronic Aids to Navigation	1	0	3	2
MRO 1107	Practical Marine Engineering II	3	0	3	4
***	Fishing Operations at Sea	*	*	*	*
		10	2	18	17
THIRD QUARTER					
CFT 1102	Fishing Operations II	0	0	12	4
CFT 1112	Net Making and Repair II	0	0	3	1
MAT 1101	Trade Mathematics	5	0	0	5
MRO 1108	Practical Marine Engineering III	1	2	3	3
MRO 1140	Marine Safety-First Aid, Life Boat Drills, and Fire Fighting Aboard Ship	1	0	3	2
***	Fishing Operations at Sea	*	*	*	*
		7	2	21	15
FOURTH QUARTER					
BUS 1103	Small Business Operations	3	0	0	3
CFT 1103	Fishing Operations III	1	2	9	5
CFT 1130	Commercial Fishing and Government	2	0	0	2
MSC 1141	Navigation	2	0	3	3
PHY 1101	Applied Science	3	2	0	4
PSY 1101	Human Relations	3	0	0	3
***	Fishing Operations at Sea	*	*	*	*
		14	4	12	20

*** Fishing Operations at Sea: Students will spend 5-10 days each quarter at sea on the College's training vessels. A typical voyage will be 5 days in duration. Depending upon the nature of the training however, a trip may extend over a one to two week period.

See pages 123 to 152 for course descriptions.

INDUSTRIAL ELECTRICITY

The Industrial Electricity program is designed to prepare students for the installation, repair, and maintenance of electrical equipment. The emphasis is on motors and related control systems, but students who take the basic courses will have sufficient knowledge and skill to work as helpers for electricians or repairmen in house wiring, small appliance repair, industrial maintenance, linemen, and related jobs.

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER				
ELC 1104 Basic Electricity I	5	0	9	8
ELN 1106 Instrument Familiarization	3	0	6	5
ENG 1101 Communication Skills	2	0	0	2
MAT 1101 Trade Mathematics	5	0	0	5
	15	0	15	20
SECOND QUARTER				
ELC 1105 Basic Electricity II	5	0	9	8
ELN 1111 Electro-Mechanical Relays and Symbols	3	0	6	5
ENG 1102 Communication Skills	2	0	0	2
MAT 1125 Industrial Calculations	5	0	0	5
	15	0	15	20
THIRD QUARTER				
DFT 1104 Blueprint Reading	2	0	3	3
ELC 1115 AC and DC Machinery	4	0	9	7
ELC 1116 Motor Control	3	0	6	5
PSY 1101 Human Relations	3	0	0	3
	12	0	18	18
FOURTH QUARTER				
DFT 1109 Blueprint Reading	2	0	3	3
ELC 1125 Industrial Wiring Practices	4	0	6	6
ELN 1130 Solid State Devices, Circuits, and Symbols	5	0	6	7
WLD 1102 Basic Welding	0	0	3	1
	11	0	18	17

MINI COURSES — When mini courses ELC 1104-A and ELC 1104-B are completed, full credit will be given for ELC 1104

ELC 1104-A Basic Electricity I	2	0	6	4
ELC 1104-B Basic Electricity I	3	0	3	4

See pages 123 to 152 for course descriptions.

INDUSTRIAL MAINTENANCE

The curriculum in Industrial Maintenance prepares students to repair and maintain machinery, electrical wiring and fixtures, and hydraulic and pneumatic devices found in industrial establishments.

Industrial maintenance persons may be required to install, maintain and service mechanical equipment; follow blueprints and sketches; and use hand tools, metal working machines, and measuring instruments and testing instruments. They operate metalworking machines such as the lathe, milling machine, and drill press to make repairs. They use the micrometer and calipers to varify dimensions. They assemble wires, insulation, and electrical components using hand tools and soldering equipment. They test electrical circuits and components to locate shorts, faulty connections, and defective parts. They inspect, test and repair hydraulic equipment.

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER				
DFT 1104 Blueprint Reading	2	0	3	3
MAT 1101 Trade Mathematics	5	0	0	5
MEC 1127 Industrial Mechanics I	5	0	9	8
WLD 1106 Welding and Burning I	0	0	6	2
	12	0	18	18
SECOND QUARTER				
DFT 1105 Blueprint Reading	0	0	3	1
ENG 1101 Communication Skills	2	0	0	2
MAT 1102 Trade Mathematics	5	0	0	5
MEC 1128 Industrial Mechanics II	5	0	9	8
WLD 1107 Welding and Burning II	0	0	6	2
	12	0	18	18
THIRD QUARTER				
DFT 1108 Blueprint Reading	2	0	3	3
ELC 1100 Basic Electricity	1	0	3	2
MEC 1113 Shop Processes I	1	0	3	2
MEC 1121 Industrial Hydraulics I	1	0	3	2
MEC 1129 Industrial Mechanics III	4	0	6	6
PSY 1101 Human Relations	3	0	0	3
	12	0	18	18
FOURTH QUARTER				
ELC 1117 Industrial AC Motors and Controls	1	0	3	2
MEC 1114 Shop Processes II	1	0	3	2
MEC 1122 Industrial Hydraulics II	1	0	3	2
MEC 1130 Industrial Mechanics IV	5	0	9	8
PHY 1101 Applied Science	3	2	0	4
	11	2	18	18

MINI COURSES — When mini courses MEC 1127-A, MEC 1127-B, MEC 1127-C, and MEC 1127-D are completed, full credit will be given for MEC 1127.

MEC 1127-A Industiral Mechanics I	1	0	3	2
MEC 1127-B Industrial Mechanics I	1	0	3	2
MEC 1127-C Industrial Mechanics I	1	0	3	2
MEC 1127-D Industrial Mechanics I	2	0	0	2

See pages 123 to 152 for course descriptions.

LIGHT CONSTRUCTION

The Light Construction curriculum prepares individuals for employment in the building trades industry. Instruction is provided in carpentry, masonry, electrical wiring, and plumbing. Students study applied mathematics, blueprint reading and sketching, safety, and other related subjects. They learn the methods used in laying out a small structure, mixing and pouring cement, rough framing, laying brick and block, roofing, and exterior finishing.

Graduates may find employment with home builders or with commercial building contractors. They may enter the building trades as apprentices or work as building maintenance mechanics in small industries or public buildings including schools, hospitals, and apartment houses. After sufficient experience in the trade, some workers may establish their own business.

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER				
CAR 1101 Carpentry (Rough)	6	0	12	10
DFT 1110 Building Trades Blueprint Reading and Sketching	5	0	0	5
ENG 1101 Communication Skills	2	0	0	2
MAT 1101 Trade Mathematics	5	0	0	5
	18	0	12	22
SECOND QUARTER				
CAR 1102 Carpentry (Framing)	5	0	15	10
DFT 1113 Blueprint Reading: Building Trades	5	0	0	5
ENG 1102 Communication Skills	2	0	0	2
PSY 1101 Human Relations	3	0	0	3
	15	0	15	20
THIRD QUARTER				
CAR 1103 Carpentry (Finishing)	4	0	21	11
PLU 1101 Basic Plumbing	2	0	3	3
	6	0	24	14

FOURTH QUARTER					
CAR 1135	Blueprints and Field Coordination	2	0	3	3
ELC 1109	Electrical Wiring	2	0	3	3
MAS 1101	Masonry	5	0	15	10
		9	0	21	16

MINI COURSES — When mini courses CAR 1101-A, CAR 1101-B, CAR 1101-C, and CAR 1101-D are completed, full credit will be given for CAR 1101.

CAR 1101-A Carpentry (Rough)	2	0	3	3
CAR 1101-B Carpentry (Rough)	2	0	3	3
CAR 1101-C Carpentry (Rough)	1	0	3	2
CAR 1101-D Carpentry (Rough)	1	0	3	2

See pages 123 to 152 for course descriptions.

MACHINIST

The Machinist curriculum gives individuals the opportunity to acquire basic skills and related technical information necessary to gain employment in the metalworking industries. The machinist is a skilled metalworker who shapes metal by using machine tools and hand tools. Machinists must be able to set up and operate the machine tools found in a modern shop. Computer Numerical Control (CNC) may be integrated into various phases of the curriculum or as specialized courses.

The machinist is able to select the proper tools and materials required for each job and to plan the cutting and finishing operations in their proper order so that the work can be finished according to blueprint or written specifications. The machinist makes computations relating to dimensions of work, tooling, feeds and speeds of machining. Precision measuring instruments are used to measure the accuracy of work. The machinist also must know the characteristics of metals so that annealing and hardening of tools and metal parts can be accomplished in the process of turning a block of metal into an intricate precise part.

		HOURS PER WEEK			
		Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER					
DFT 1104	Blueprint Reading	2	0	3	3
ENG 1101	Communication Skills	2	0	0	2
MAT 1101	Trade Mathematics	5	0	0	5
MEC 1101	Machine Shop Theory and Practice	3	0	15	8
		12	0	18	18

MACHINIST (continued)

		HOURS PER WEEK			
		Class	Lab	Manipulative Lab	Quarter Hours Credit
SECOND QUARTER					
DFT 1105	Blueprint Reading	0	0	3	1
MAT 1102	Trade Mathematics	5	0	0	5
MEC 1102	Machine Shop Theory and Practice	3	0	15	8
WLD 1101	Basic Welding	1	0	3	2
		9	0	21	16
THIRD QUARTER					
DFT 1106	Blueprint Reading	0	0	3	1
MAT 1122	Machinist Mathematics I	5	0	0	5
MEC 1103	Machine Shop Theory and Practice	3	0	15	8
MEC 1109	Computer Controlled Machine Tools I	2	2	0	3
		10	2	18	17
FOURTH QUARTER					
MAT 1123	Machinist Mathematics II	5	0	0	5
MEC 1104	Machine Shop Theory and Practice	4	0	12	8
MEC 1110	Computer Controlled Machine Tools II	2	2	0	3
PHY 1101	Applied Science	3	2	0	4
		14	4	12	20

MINI COURSES — When mini courses MEC 1101-A, MEC 1101-B, and MEC 1101-C are completed, full credit will be given for MEC 1101.

MEC 1101-A	Machine Shop Theory and Practice	1	0	3	2
MEC 1101-B	Machine Shop Theory and Practice	1	0	6	3
MEC 1101-C	Machine Shop Theory and Practice	1	0	6	3

See pages 123 to 152 for course descriptions.

MARINE AND DIESEL MECHANICS

The Marine and Diesel Mechanics curriculum provides training for individuals interested in becoming mechanics to service and maintain the propulsion system for boats and various type of marine equipment. Manual skills in servicing marine equipment are developed in practical shop work. A thorough understanding of the operating principles of this equipment is provided through classroom instruction, laboratory experiments, group discussions, and shop practices.

Marine engine mechanics maintain and repair mechanical, electrical, hydraulic, and pneumatic equipment used on boats and in industrial applications. Mechanics

inspect and test equipment to determine the causes of faulty operations; repair or replace defective parts to restore the machine or unit to proper operating condition; and use shop manuals, manufacturers' maintenance manuals, and other publications for technical information.

		HOURS PER WEEK			
		Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER					
ENG 1101	Communication Skills	2	0	0	2
MAT 1101	Trade Mathematics	5	0	0	5
PHY 1101	Applied Science	3	2	0	4
PME 1101	Internal Combustion Engines	3	0	15	8
		13	2	15	19
SECOND QUARTER					
ELC 1111	Direct and Alternating Electricity	2	2	0	3
ENG 1102	Communication Skills	2	0	0	2
MDE 1101	Marine and Diesel Engine Theory and Practice I	2	0	12	6
MDE 1104	Marine and Diesel Power-Train Systems I	1	0	3	2
MDE 1108	Gas and Diesel Fuel Systems I	2	0	3	3
PME 1131	Schematics and Diagrams: Marine and Diesel	3	0	0	3
		12	2	18	19
THIRD QUARTER					
MDE 1102	Marine and Diesel Engine Theory and Practice II	3	0	12	7
MDE 1105	Marine and Diesel Power-Train Systems II	1	0	3	2
MDE 1109	Gas and Diesel Fuel Systems II	2	0	3	3
PSY 1101	Human Relations	3	0	0	3
WLD 1101	Basic Welding	1	0	3	2
		10	0	21	17
FOURTH QUARTER					
MDE 1103	Marine and Diesel Engine Theory and Practice III	3	0	15	8
MDE 1110	Gas and Diesel Fuel Systems III	2	0	3	3
PME 1136	Fundamentals of Hydraulics	3	0	6	5
		8	0	24	16

MINI COURSES — When mini courses MDE 1101-A, MDE 1101-B, MDE 1101-C, and MDE 1101-D are completed, full credit will be given for MDE 1101.

MDE 1101-A	Marine and Diesel Engine Theory and Practice I	1	0	3	2
MDE 1101-B	Marine and Diesel Engine Theory and Practice I	1	0	3	2
MDE 1101-C	Marine and Diesel Engine Theory and Practice I	0	0	3	1
MDE 1101-D	Marine and Diesel Engine Theory and Practice I	0	0	3	1

See pages 123 to 152 for course descriptions.

MARINE MAINTENANCE AND RELATED OCCUPATIONS

This curriculum is designed to train workers in seamanship, ship maintenance, towing operations, and salvage.

Upon completion of this curriculum, an individual will be qualified to work as an able seaman or in jobs in ship building, ship maintenance, or salvage operations.

		HOURS PER WEEK			
		Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER					
MRO 1101	Rules of the Road and Piloting	1	6	0	4
MRO 1106	Practical Marine Engineering I	1	0	3	2
MRO 1139	Rigging and Seamanship	1	0	3	2
SHI 1101	Ships' Equipment, Maintenance and Repair I	3	0	6	5
WLD 1106	Welding and Burning I	0	0	6	2
***	Ocean Training Voyages	*	*	*	*
		6	6	18	15
SECOND QUARTER					
ELC 1106	Practical Marine Electricity I	3	0	3	4
ENG 1101	Communication Skills	2	0	0	2
MRO 1102	Electronic Aids to Navigation	1	0	3	2
MRO 1107	Practical Marine Engineering II	3	0	3	4
SHI 1102	Ships' Equipment, Maintenance, and Repair II	3	0	3	4
WLD 1107	Welding and Burning II	0	0	6	2
***	Ocean Training Voyages	*	*	*	*
		12	0	18	18
THIRD QUARTER					
ELC 1107	Practical Marine Electricity II	3	0	3	4
MAT 1101	Trade Mathematics	5	0	0	5
MRO 1108	Practical Marine Engineering III	1	2	3	3
MRO 1140	Marine Safety-First Aid, Life Boat Drills, and Fire Fighting Aboard Ship	1	0	3	2
SHI 1103	Ships' Equipment, Maintenance, and Repair III	3	0	6	5
***	Ocean Training Voyages	*	*	*	*
		13	2	15	19
FOURTH QUARTER					
BUS 1103	Small Business Operations	3	0	0	3
MRO 1115	Towboat Operations	2	0	6	4
MSC 1141	Navigation	2	0	3	3
PHY 1101	Applied Science	3	2	0	4
PSY 1101	Human Relations	3	0	0	3
SHI 1104	Ships' Equipment, Maintenance, and Repair IV	3	0	3	4
***	Ocean Training Voyages	*	*	*	*
		16	2	12	21

*** Ocean Training Voyages: Students will spend 5-10 days each quarter at sea on the College's training vessels. A typical voyage will be 5 days in duration. Depending upon the nature of the training however, a trip may extend over a one to two week period.

See pages 123 to 152 for course descriptions.

PRACTICAL NURSING

The Practical Nursing curriculum graduates are prepared to take the National Council Licensure Examination required to practice as a licensed practical nurse. The Practical Nursing curriculum is designed to develop competencies in practicing the following five components of practice as defined by the North Carolina Nursing Practice Act 1981: participating in assessing the client's physical and mental health including the client's reaction to illnesses and treatment regimens; recording and reporting the results of the nursing assessment; participating in implementing the health care plan developed by the registered nurse and/or prescribed by any person authorized by State law to prescribe such a plan, by performing tasks delegated by and performed under the supervision or under orders or directions of a registered nurse, physician licensed to practice medicine, dentist, or other person authorized by state law to provide such supervision; reinforcing the teaching and counseling of a registered nurse, physician licensed to practice medicine in North Carolina, or dentist; and reporting and recording the nursing care rendered and the client's response to that care.

Licensed practical nurses may be employed in hospitals, nursing homes, clinics, doctors' offices, industry, and public health agencies.

Individuals desiring a career in practical nursing should be encouraged to take math and science courses in high school.

	HOURS PER WEEK			
	Class	Lab	Clinical	Quarter Hours Credit
FIRST QUARTER				
BIO 1001 Health	3	0	0	3
BIO 1002 Anatomy and Physiology	6	0	0	6
ENG 1103 Grammar	3	0	0	3
NUR 1101 Nursing Skills	4	2	3	6
NUT 1101 Nutrition and Diet Therapy	4	0	0	4
PSY 1101 Human Relations	3	0	0	3
	23	2	3	25

PRACTICAL NURSING (continued)

	HOURS PER WEEK			
	Class	Lab	Clinical	Quarter Hours Credit
SECOND QUARTER				
NUR 1102 Medical-Surgical Nursing I	5	2	6	8
NUR 1103 Pediatrics	5	0	9	8
PSY 1102 Growth and Development	3	0	0	3
	13	2	15	19
THIRD QUARTER				
NUR 1104 Obstetrics	6	0	12	10
NUR 1105 Pharmacology	5	2	6	8
	11	2	18	18
FOURTH QUARTER				
NUR 1106 Medical-Surgical Nursing II	7	2	9	11
NUR 1107 Medical-Surgical Nursing III	4	0	6	6
	11	2	15	17

See Pages 123 to 152 for course descriptions.

WELDING

The Welding curriculum gives students sound understanding of the principles, methods, techniques, and skills essential for successful employment in the welding field and metals industry. Welders join metals by applying intense heat, and sometimes pressure, to form a permanent bond between intersecting metals.

Welding offers employment in practically any industry: shipbuilding, automotive, aircraft, guided missiles, heavy equipment, railroads, construction, pipefitting, production shops, job shops, and many others.

	HOURS PER WEEK			
	Class	Lab	Manipulative Lab	Quarter Hours Credit
FIRST QUARTER				
DFT 1112 Blueprint Reading: Welding	1	0	3	2
MAT 1101 Trade Mathematics	5	0	0	5
WLD 1119 Basic Arc Welding and Oxy-Fuel Cutting	7	0	9	10
	13	0	12	17
SECOND QUARTER				
DFT 1117 Blueprint Reading: Welding	0	0	3	1
ENG 1101 Communication Skills	2	0	0	2
PHY 1101 Applied Science	3	2	0	4
WLD 1127 Advanced Arc Welding	7	0	9	10
	12	2	12	17

THIRD QUARTER					
DFT 1120	Blueprint Reading of Pipe Drawings and Pipe Sketchings	0	0	3	1
MEC 1113	Shop Processes I	1	0	3	2
PHY 1102	Applied Science	3	2	0	4
WLD 1122	Commercial and Industrial Practices	3	0	0	3
WLD 1123	Inert Gas Welding (Tig, Mig, and Plasma)	7	0	6	9
		14	2	12	19
FOURTH QUARTER					
ENG 1102	Communication Skills	2	0	0	2
MEC 1114	Shop Processes II	1	0	3	2
PSY 1101	Human Relations	3	0	0	3
WLD 1124	Pipe Welding	4	0	6	6
WLD 1125	Certification Practices	3	0	3	4
		13	0	12	17

MINI COURSES — When mini courses WLD 1119-A, WLD 1119-B, WLD 1119-C, and WLD 1119-C are completed, full credit will be given for WLD 1119.

WLD 1119-A Basic Arc Welding and Oxy-Fuel Cutting	1	0	3	2
WLD 1119-B Basic Arc Welding and Oxy-Fuel Cutting	1	0	3	2
WLD 1119-C Basic Arc Welding and Oxy-Fuel Cutting	2	0	3	3
WLD 1119-D Basic Arc Welding and Oxy-Fuel Cutting	3	0	0	3

See pages 123 to 152 for course descriptions.

TRADE COURSE DESCRIPTIONS

AHR 1100 - Automotive Air Conditioning
This course is a general introduction to the principles of refrigeration; study of the assembly of components and connections necessary in the mechanisms; and the methods of refrigerants in charging the system.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

AHR 1109 - Job Planning and Estimating
Emphasis is placed on estimating loads and capacity of refrigeration and cooling units through the use of manuals, tables, and charts. Students will be expected to acquire sufficient knowledge to determine and recommend the adequate sizing of cooling units for specific use either in homes or industry.
Course Hours Per Week: Class 2. Quarter Hours Credit 2.
Prerequisite: MAT 1102

AHR 1116 - Oil Burner Installation and Service
This course is an introduction to the principle of heating, terminology, and the use and repair of equipment. Also included will be maintenance and service of heating units and diagnosing troubles within installation. Thermostat controls are also a part of this course.
Course Hours Per Week: Class 4, M. Lab 6. Quarter Hours Credit 6.
Prerequisite: None

AHR 1116-A - Oil Burner Installation and Service
This course is an introduction to the principle of heating, terminology, and the use and repair of equipment.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

AHR 1116-B - Oil Burner Installation and Service
Students will learn maintenance and service of heating units, diagnosing troubles within and installation. Thermostats are also part of this course.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: AHR 1116-A

AHR 1117 - Gas Burners, Electric Heat and Liquid Heat Applications
This course is an introduction to the principles of heating with the use of gas, electric, or liquid heat units. The course includes installation and service of the above forms of heating units. The course will also include servicing and corrective maintenance techniques as it applies to the above three forms of heating units.
Course Hours Per Week: Class 5, Lab 2. Quarter Hours Credit 6.
Prerequisite: ELC 1102

AHR 1121 - Principles of Refrigeration - Part I
This course is an introduction to the principles of refrigeration terminology, the use and care of tools and equipment, and the identification and the function of the component parts of a system. Other topics to be included will be the basic laws of refrigeration; characteristics and comparison of the various refrigerants; the use and construction of valves, fittings, and basic controls. Practical work includes tube bending, flaring and soldering. Standard procedures and safety measures are stressed in the use of special refrigeration service equipment and the handling of refrigerants.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

AHR 1122 - Principles of Refrigeration - Part II
The student will learn how to take air measurement using the pilot tube to calculate velocity in feet per minute, how to use the pilot tube measuring round duct, rectangular duct, how to use the anemometer, and how to calculate C.F.M. using the temperature-rise method.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: AHR 1121

AHR 1123 - Principles of Air Conditioning
Emphasis is placed on the installation, maintenance, and servicing of equipment used in the cleaning, changing, humidification and temperature control of air in an air-conditioned space. Installation of various ducts and lines needed to connect various components is made.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: AHR 1122

AHR 1124 - Air Conditioning Servicing
Emphasis is placed on the installation, maintenance, and servicing of equipment used in the cleaning, changing, humidification and temperature control of air in an air-conditioned space. Installation of various ducts and lines needed to connect various components is made. Shop work involves controls, testing and adjusting of air conditioning equipment, and location and correction of equipment failure.
Course Hours Per Week: Class 2, M. Lab 9. Quarter Hours Credit 5.
Prerequisites: AHR 1122, ELC 1103

AHR 1126 - All Year Comfort Systems
Auxiliary equipment used in conjunction with refrigeration systems to provide both heating and cooling for "all year" comfort will be studied and set up in the laboratory. Included will be oil-fired systems, gas fired systems, water circulating systems, and electric-resistance systems. Installation of heat pumps will be studied along with servicing techniques. Reversing valves, special types of thermostatic expansion valves, systems of de-icing coils, and electric wiring and controls are included in the study.
Course Hours Per Week: Class 4, Lab 2, M. Lab 6. Quarter Hours Credit 7.
Prerequisites: AHR 1122, AHR 1117

AHR 1128 - Automatic Controls
Students will study the various control thermostat systems used by manufacturers for the installation of their equipment. This course includes resetting and calibrating of control units used on the various heating systems. The principles of how these controls work is also discussed.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: ELC 1103

AUT 1120 - Automotive Analysis
An analytical approach to troubleshooting and preventive maintenance through the use of mechanical equipment, electronic instrumentation, and visual inspection will be studied. Students will train on various electronic analysis equipment (chassis dynamometer, combustion analyzer, etc.) for proper troubleshooting diagnosis. Students will be instructed in procedures to be followed in troubleshooting analysis of an internal combustion engine, brakes, steering and suspension, electrical circuits, and drive lines.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

AUT 1121 - Braking Systems
A complete study of the various braking systems employed on automobiles and lightweight trucks will be covered. Emphasis is placed on braking systems, how they operate, proper adjustment and repair, and safety factors involved.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4
Prerequisite: None

AUT 1123 - Automotive Chassis and Suspension Systems
This course includes the principles and functions of the components of automotive chassis. Practical job instruction in adjusting and repairing of suspension and steering systems will be covered. Units to be studied: shock absorbers, springs, steering systems, steering linkage, and front end alignment.
Course Hours Per Week: Class 3, M. Lab 9. Quarter Hours Credit 6.
Prerequisite: None

AUT 1124 - Automotive Power-Train Systems
This course will include the principles and functions of automotive power train systems: clutches, transmission gears, torque converters, drive shaft assemblies, rear axles, and differentials. Identification of troubles, servicing, and repair will be covered.
Course Hours Per Week: Class 3, M. Lab 9. Quarter Hours Credit 6.
Prerequisite: None

AUT 1125 - Automotive Servicing
Emphasis is on the shop procedures necessary in determining the nature of troubles which may develop in the various component systems of the automobile. Troubleshooting of automotive systems, providing a full range of experiences in testing, adjusting, repairing, and replacing will be covered.
Course Hours Per Week: Class 3, M. Lab 9. Quarter Hours Credit 6.
Prerequisite: None

AUT 1126 - Schematics and Diagrams: Automotive
Emphasis is placed on interpretation and reading of manufacturing diagrams. Student will develop the ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. Information on the basic principles of lines, views, dimensioning procedures, and notes will be covered.
Course Hours Per week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: None

AUT 1129 - Emission Systems: Automotive
The purpose of this program is to provide a basic knowledge of what the various Emission Control Systems are and how they operate. Once the basics of these systems are understood, the knowledge can be applied to specific applications which the student will use to handle future changes in Emission Control Systems. Topics to be covered are Air Pollution, Major Pollutants, Photochemical Smog, Hydrocarbon, Carbon Monoxide, oxides of Nitrogen, particulates, Air Pollution legislation and regulatory agencies, and automotive emission controls.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

BIO 1001 - Health
This course assists in helping the student understand the meaning of health and all types of health. It also describes personal health and how it relates to nurses and patients. Useful signs in evaluating health are explained. Health agencies in the community are identified and a public health nurse and a sanitarian are invited as guest speakers. The individual and his or her relationship to the environment helps the student understand how the health of some patients has been affected. In summary, a description of the health team and the identification of its various members are given.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

BIO 1002 - Anatomy and Physiology
This course is designed to help the student gain a beginning knowledge of heredity, including an understanding of the cell, tissues, organs, and organ systems. An introduction to bacteriology will be given and body defenses, including the types of immunity. Detailed instruction will be given in learning the systems of the body.
Course Hours Per Week: Class 6. Quarter Hours Credit 6.
Prerequisite: None

BIO 1101 Introduction to Marine Biology
This course is designed to acquaint the student with the fundamentals of marine biology applicable to his or her field of work.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

BUS 1103 - Small Business Operations
This course is an introduction to the business world, problems of small business operation, basic business law, business forms and records, financial problems, ordering and inventorying, layout of equipment and offices, methods of improving business and employer - employee relations.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

CAR 1101 - Carpentry (Rough)
This course is a brief history of carpentry. Present trends of the construction industry will be covered along with the operation, care, and safe use of the carpenter's hand and power tools used in cutting, shaping, and joining construction materials. Carpentry layout and framing basics will be emphasized in this course.
Course Hours Per Week: Class 6, M. Lab 12. Quarter Hours Credit 10.
Prerequisite: None

CAR 1101-A - Carpentry (Rough)
This is a basic summary course in residential construction which will cover such topics as: tools needed in light construction, construction materials, leveling instruments, building layout, plans and codes, footings and foundations, floor framing, wall and ceiling framing, roof framing, roofing materials, windows and exterior doors, exterior wall finish, thermal and sound insulation, interior wall and ceiling finishing, finish flooring, and doors and interior trim. This course will provide information so that the student can plan for new construction or renovation.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

CAR 1101-B - Carpentry (Rough)
Present trends of the construction industry will be covered along with the operation, care, and safe use of the carpenter's hand and power tools. Practice in cutting, shaping, and joining construction materials used by the carpenter will be emphasized. A thorough discussion and assigned lab activities in building layout and construction of foundations will be covered.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: CAR 1101-A

CAR 1101-C - Carpentry (Rough)
This course will cover types of framing for residential construction, both platform and balloon framing. Post and beam construction will also be covered. Basic floor framing for platform construction will be covered and lab assignments made to reinforce this learning.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: CAR 1101-B

CAR 1101-D - Carpentry (Rough)
Present trends of the construction industry will be covered along with the operation, care, and safe use of the carpenter's hand and power tools. In this course, emphasis will be placed on wall and roof framing and those procedures needed to build a residential home.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: CAR 1101-C

CAR 1102 - Carpentry (Framing)
Emphasis is placed on practical application in roŭgh carpentry which consists of: framing, roofing, window and exterior door installation, exterior wall covering, exterior trim, and form work. Roof layout and framing will be emphasized in this course.
Course Hours Per Week: Class 5, M. Lab 15. Quarter Hours Credit 10.
Prerequisite: None

CAR 1103 - Carpentry (Finishing)
Millwork as performed by the general carpenter during building construction using shop tools and equipment will be emphasized in this course. Practical applications will include measuring, layout, and construction of door and window frames, stairs, interior and exterior cornice and trim work. Prefabricated materials will also be covered. Exterior and interior trim and finishing carpentry will be studied.
Course Hours Per Week: Class 4, M. Lab 21. Quarter Hours Credit 11.
Prerequisite: None

CAR 1110 - Modern Yacht Joiner Practices I
In this course the student will learn the necessary skills to rough-in the interior bulkheads, soles, furniture, and cabinetry in the modern yacht.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: MSC 1110

CAR 1111 - Modern Yacht Joiner Practices II
This course is an extension of Modern Yacht Jointer Practices I. Emphasis is placed on the finished woodworking and trim. Doors, drawers, and moldings will be constructed. Production jigs to increase efficiency will be utilized. Modern oils, paints, and varnish applications will be practiced.
Course Hours Per Week: Class 2, M. Lab 6. Quarter Hours Credit 4.
Prerequisite: CAR 1110

CAR 1114 - Yacht Repair and Renovation
This course introduces repair principals and methods for wood and fiberglass boats.
Course Hours Per Week: Class 4, M. Lab 9. Quarter Hours Credit 7.
Prerequisite: MSC 1112

CAR 1135 - Blueprints and Field Coordination
Construction blueprints will be studied and field trips will be made to construction sites in order that students may gain first-hand experience reading project blueprints of jobs under construction presently by contractors.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

CFT 1101 - Fishing Operations I
This course is designed to introduce the student to various fishing methods including gill netting, haul seining, traps, etc. The different materials used for building fishing gear will be studied. Basic net fabrication and net mending are also introduced. Instruction in maintenance and repair of vessel and gear will also be included. Field trips will include visits to ports to observe other types of fishing vessels and fishing methods.
Course Hours Per Week: Class 1, M. Lab 9. Quarter Hours Credit 4.
Prerequisite: For fishing trip - 12 quarter hours minimum enrollment in other Commercial Fishing curriculum courses.

CFT 1102 - Fishing Operations II
This course is a continuation of CFT 1101. Fishing trips will be made using as many types of gear as possible for catching the various kinds of fish in season. The students on field trips will continue to observe other vessels and methods of fishing. Importance of maintenance and repair of vessel and gear will be stressed.
Course Hours Per Week: M. Lab 12. Quarter Hours Credit 4.
Prerequisite: CFT 1101

CFT 1103 - Fishing Operations III
This course is a continuation of CFT 1102 designed to study in-depth fishing methods and gear construction and give students as much "hands-on" practical experience as possible. Numerous and extensive field trips will be necessary to obtain these goals. Students' knowledge of maintenance and repair of vessel and gear will continue to be practiced.
Course Hours Per Week: Class 1, Lab 2, M. Lab 9. Quarter Hours Credit 5.
Prerequisite: CFT 1102

CFT 1111 - Netmaking and Repair I
This course will give the students necessary practice with twine, rope, and webbing. This will involve learning how to mend holes in nets, cut out different types of trawl patterns, and put the different parts of nets together for use in the fishing operation classes. The necessity for different types of nets for different areas, conditions, and target species will be stressed.
Course Hours Per Week: Lab 2. Quarter Hours Credit 1.
Prerequisite: None

CFT 1112 - Netmaking and Repair II
This course is a continuation of Netmaking and Repair I. Having learned the basic net designs and repairs in CFT 1111, the student will work on more advanced net patterns and repairs. This class will prepare most of the commercial fishing nets used aboard the Dan Moore. Emphasis will be placed on correct sizing of gear to vessel capabilities.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: CFT 1111

CFT 1130 - Commercial Fishing and Government
This course will alert the prospective commercial fisherman to laws that affect his livelihood which have come into effect during recent years. The student will be instructed as to how to interpret these laws and use them for his or her benefit. Also, students will learn how to interact with the law makers to improve the systems of management.
Course Hours Per Week: Class 2. Quarter Hours Credit 2.
Prerequisite: None

DFT 1104 - Blueprint Reading
Students will study interpretation and reading of blueprints. Information is provided on the basic principles of the blueprint: lines, views, dimensioning procedures and notes.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

DFT 1105 - Blueprint Reading
Emphasis is placed on further practice in interpretation of blueprints as they are used in industry; study of prints supplied by industry; making plans of operation, introduction to drafting room procedures; sketching as a means of passing on ideas, information and processes.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: DFT 1104.

DFT 1106 - Blueprint Reading
Students will study advanced blueprint reading and sketching as related to detail and assembly drawings used in machine shops. The interpretation of drawing of complex parts and mechanisms for features of fabrication, construction, and assembly is included.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: DFT 1105

DFT 1108 - Blueprint Reading
This is a general course in interpreting blueprints. Analysis of electrical and pneumatic systems will be emphasized. Mechanical devices including piping, machines, gears, and system color coding will be introduced.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: DFT 1104

DFT 1109 - Blueprint Reading
This is a general course in interpretation of blueprints. Analysis of electrical and plumbing systems will be emphasized. Mechanical devices including heat and air, insulation, structure design, and system color coding will be introduced.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: DFT 1104

DFT 1110 - Building Trades Blueprint Reading and Sketching
Emphasis is placed on principles of interpreting blueprints and trade specifications common to the building trades. Students develop proficiency in making three-view and pictorial sketches.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

DFT 1112 - Blueprint Reading: Welding
Emphasis is placed on a thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations, and specifications are introduced.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

DFT 1113 - Blueprint Reading: Building Trades
Emphasis shall be placed upon reading and understanding all aspects of actual blueprints and the interpretation expected by the architect. Dimensions, symbols, special specifications, etc. are to be emphasized in this course.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

DFT 1114 - Blueprint Reading
Emphasis is placed on interpretation and reading of blueprints. Information is provided on the basic principles of the blueprint: lines, views, dimensioning procedures, and notes. There are fewer assigned projects required than in DFT 1104.
Course Hours Per Week: Class 2. Quarter Hours Credit 2.
Prerequisite: None

DFT 1116 - Blueprint Reading: Air Conditioning
This is a specialized course in drafting for the Air Conditioning, Heating, and Refrigeration student. Emphasis will be placed on reading of blueprints that are common to the trade; and blueprints of mechanical components, assembly drawings, wiring diagrams and schematics, floor plans, heating system plans, including duct and equipment layout plans, and shop sketches. The student will make tracings of floor plans and layout air conditioning systems.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: DFT 1114

DFT 1117 - Blueprint Reading: Welding
This is a continuation of DFT 1112 which embodies a thorough study of trade drawings in which welding procedures are indicated. Interpretation, use and application of welding symbols, abbreviations, and specifications will also be studied.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: None

DFT 1120 - Blueprint Reading of Pipe Drawings and Pipe Sketching
Students will learn basic principles and methods of reading; reading and dimensioning pipe drawings with emphasis on piping relating to welders.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: None.

DFT 1127 - Marine Drafting
Students will learn how to read and understand boat plans. Each student will develop a lines plan from a table of offsets using standard marine drafting equipment. There will also be projects designed to give the student practical experience in interpreting blueprints.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: None

EDU 1006 - Language Arts in Early Childhood
This course deals with the child and his or her social environment. Emphasis is on the use of a variety of teaching techniques which will stimulate language development and an awareness of the child's social environment and social learnings.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDU 1009 - Art in the Early Childhood Programs
This course is a study of art media in relation to the creative process in young children, of the educational component that each medium reinforces, and of the ways a variety of low-cost art activities can be incorporated into a program for young children. Laboratory sessions provide first-hand experience with all of the media, opportunities to explore the uses of each, and practice in the care and storage of materials. Each student will plan a meaningful sequence of art activities which could be incorporated into a program for young children.
Course Hours Per Week: Class 1, Lab 2, Practicum 10. Quarter Hours Credit 3.
Prerequisite: None

EDU 1022 - Mathematics, Science, and Social Studies for Young Children
This course deals with the child and his or her physical environment. Emphasis is on a variety of teaching techniques designed to stimulate an interest in and an understanding of simple mathematics and science concepts by young children. Activities appropriate for children at different levels of development will be discussed.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDU 1101 - Child Growth and Development (Infant-Toddler 0-36 months)
This course will study the development from birth to age three and study the problems specific to group care of children 36 months and younger. Each student will develop a plan of care for a group of children; the plan must reflect concern for the child's total development and show procedures for dealing with the practical problems of providing safe care for children 0-36 months.
Course Hours Per Week: Class 1, Lab 2, Practicum 10. Quarter Hours Credit 3.
Prerequisite: None

EDU 1102 - Child Growth and Development (Preschool 2-5 years)
This course deals with the basic principles of development and the developmental sequence of preschool aged children (2-5 years old). This age group will be examined in-depth with emphasis being given to factors influencing development. Children with special needs and techniques of guiding children's behavior will also be presented.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDU 1103 - Music and Integrated Activities
This course is designed to develop an awareness of the fundamentals of music; skill in utilizing a wide variety of materials for rhythm, singing, and instrumental performance; and use of creative movement and music for emotional expression and learning.
Course Hours Per Week: Class 1, Lab 2. Quarter Hours Credit 2.
Prerequisite: None

EDU 1105 - Health, Safety, and Nutrition of the Young Child
This course is designed to promote an understanding of factors which influence physical and emotional health and nutrition during infancy and childhood. Classroom activities focus on practices and procedures for promoting good health, safety, and nutrition among children in group care. The influence of child care workers on health, safety, and nutrition in a group care situation is emphasized throughout the course.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDU 1106 - Nutrition/Cooking Experince
This course is designed to promote an understanding of basic nutritional concepts. This nutrition information will enhance the student's ability to provide cooking experiences for his or her curriculum planning in the classroom.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDU 1111 - Communicating Effectively with Young Children
This course is a study in interpersonal communication between the child care worker, parents, other staff, and children. The student will acquire the abilities of speaking openly and frankly without alienating. Being a skillful listener, receiving and accepting suggestions, giving additional insights, and communication techniques will be studied in this course.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDU 1113 - Early Childhood Curriculum Planning: Social Studies and Special Holidays
This course is designed to help students provide opportunities for children to understand, acquire and use verbal and non-verbal means of communicating thoughts and feeling. Students will have an opportunity to design learning episodes that will help children develop their communication skills by providing planned opportunities for children to listen, interact, and express themselves wi h other children and adults.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDU 1115 - Early Childhood Curriculum Planning: Construction, Physical, and Blocks
This course will assist students in learning to provide a variety of equipment, activities, and opportunities to promote the physical development of children.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDU 1116 - Early Childhood Curriculum Planning: Cognitive
In this course the student will learn how to design and implement activities and experiences that develop questioning, probing, exploration, and problem-solving appropriate to the developmental levels and learning styles of children.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDU 1118 - Operation of Child Care Programs
This course is designed to assist students in establishing policies and procedures for the operation of a center for the daily group care of young children.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDU 1122 - Guiding Children's Behavior
This course is designed to help the student develop an understanding of discipline as an educational tool for the young child. It is important for the early childhood teacher to develop an attitude of positive interaction with children and other adults in order to foster growth of positive behavior in young children.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDU 1125 - Working with Parents
The purpose of this course is to learn how to have open, positive, and meaningful communication between staff and parents. Also, to help promote understanding and sharing of responsibilities to actively involve parents in their child's preschool/day-care experience, including activities for the working parent.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDU 1130 - Introduction to Preschool Education
This course will cover the philosophy of early childhood education, the types of experiences, facilities, and media which will promote optimal development of each child. Licensing and Approval Standards will be explored. Opportunities to compare a variety of early childhood programs will be provided.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EDU 1138 - Program Planning for Infants and Toddlers
This course is designed to provide students with an awareness of basic principles of early childhood education and trends from theory, practice, and research that have contributed to the development of programs for infants and toddlers; programming approaches used in day cares; an organized collection of development concepts specific for programmers, teacher, and caregiver roles; behavioral descriptions; suggestions for settings and activities from which the teacher-caregiver can select and learn; infant/toddler programming issues and problems; and features from a variety of infant/toddler program models. To fulfill the ten (10) hours per week practicum requirement, students must work in a day-care center practicing the skills being taught during class time.
Course Hours Per Week: Class 1, Lab 2, Practicum 10. Quarter Hours Credit 3.
Prerequisite: None

EDU 1148 - Infant-Toddler Care
This course provides a study of techniques and problems specific to the care and guidance of infants and toddlers. The provision of consistent, nurturing care, appropriate stimulation, and arrangement of the environment will also be addressed.
Course Hours Per Week: Class 1, Lab 2. Quarter Hours Credit 2.
Prerequisite: None

EDU 1203 - Exceptional Children
This course is designed to guide the student in a study of children with developmental variations requiring modification in activities. Consideration is given to recognition of problems, community resources, and appropriate activities for the child with exceptional deviations in mental or physical development.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

EGY 1101 - Introduction to Solar Energy Systems
Students will study the basic theory and current state of the art of solar energy usage in residential, commercial and industrial heating, cooling, and hot water. Basic concepts of solar radiation, thermodynamics and heat transfer will be introduced. Laboratory will include hands-on testing and performance measurement of solar equipment and systems.
Course Hours Per Week: Class 1, Lab 2. Quarter Hours Credit 2.
Prerequisites: AHR 1116, AHR 1121, ELC 1102, DFT 1114.

ELC 1100 - Basic Electricity
This course is an introduction to basic principles of electricity, basic electric units and symbols, Ohm's Law, and the use of electrical measuring instruments. This course is not as in-depth as ELC 1104, Basic Electricity.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

ELC 1101 - Practical Marine Electricity
Emphasis is placed on an understanding of the basic 12-volt (DC) direct current electrical system from boat batteries. The (AC) alternating current system which is on some small vessels is also discussed. The installation and wiring of the various lights, electrical instruments and electric motors on a boat is studied in great detail. Safety is stressed throughout the course.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

ELC 1102 - Applied Electricity - Part I
This course is an introduction to basic theories and principles of electricity. Basic electric control circuits, Ohm's Law, series and parallel circuits are covered.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

ELC 1103 - Applied Electricity - Part II
Students will study the use and care of test instruments and equipment used in servicing electrical apparatus for air conditioning and refrigeration installations. Electrical principles and procedures for troubleshooting of the various electrical devices used in air conditioning, heating, and refrigeration equipment are stressed. Included will be tranformers, various types of motors and starting devices, switches, electrical heating devices, and wiring.
Course Hours Per Week: Class 2. Quarter Hours Credit 2.
Prerequisite: ELC 1102

ELC 1104 - Basic Electricity I
This course gives an introduction to basic theories and principles of electricity, as well as to basic electric units, symbols, and Ohm's Law regarding series and parallel circuits.
Course Hours Per Week: Class 5, M. Lab 9. Quarter Hours Credit 8.
Prerequisite: None

ELC 1104-A - Electricity I
This course gives an introduction to basic theories and principles of electricity, as well as to basic electric units, conductors, and insulators.
Course Hours Per Week: Class 2, M. Lab 6. Quarter Hours Credit 4.
Prerequisite: None

ELC 1104-B - Electricity I
This course gives an introduction to basic theories and principles of electricity, as well as to basic electric units, conductors, and insulators.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4.
Prerequisite: ELC 1104-A

ELC 1105 - Basic Electricity II
This course gives an introduction to alternating current theory, sine wave generation and analysis, induction, reactance, impedance, phase relations, transformers, and power factor corrections.
Course Hours Per Week: Class 5, M. Lab 9. Quarter Hours Credit 8.
Prerequisite: ELC 1104

ELC 1106 - Practical Marine Electricity I
This course offers the student basic instruction in electricity and its practical application as used aboard modern seagoing vessels.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4.
Prerequisite: None

ELC 1107 - Practical Marine Electricity II
Operation, maintenance, and repair of ship's generators including transfer of power and phasing is studied in this course. The student will study ship's wiring from distribution boards to equipment and lights, etc.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4.
Prerequisite: ELC 1106

ELC 1109 - Electrical Wiring
This course gives an introduction to basic theories and principles of electricity, as well as basic units, symbols, and Ohm's Law regarding series and parallel circuits. The course also gives a basic principle of residential and commercial wiring according to National Electrical Codes and area building codes.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

ELC 1111 - Direct and Alternating Electricity
This course provides a thorough study of the electrical system of the equipment powered by gas and diesel engines. Battery cranking mechanisms, generators and alternators, ignition systems, accessories and wiring special tools, and use of testing equipment for electrical systems are covered.
Course Hours Per Week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisite: None

ELC 1115 - AC and DC Machinery
AC and DC motors, generators, voltage and current regulators, speed control, reversing and braking systems, and characteristics are studied. The student will physically set up and wire various systems and then collect data to determine characteristics and efficiency of system
Course Hours Per Week: Class 4, M. Lab 9. Quarter Hours Credit 7.
Prerequisite: ELC 1104

ELC 1116 - Motor Control
This course is an introduction to control components, i.e., contractors, motor starters, pilot devices, code considerations, types of control, control circuits, analysis of control circuits, maintenance and troubleshooting of motor and control circuits including solid state.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: ELN 1111

ELC 1117 - Industrial AC Motors and Controls
This course will cover the fundamental concepts in single and polyphase circuits, machines, and controls. Instruction in the use of electrical test equipment in circuit analysis and troubleshooting will be given with practice in wiring electrical motors and motor control centers. Emphasis on OSHA safety regulations in the field of industrial electricity will also be given.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: ELC 1100

ELC 1125 - Industrial Wiring Practices
Wiring methods in industrial complexes are covered, including wire sizing, splicing, and code. Raceways, wireways, and duct systems are introduced. Accepted methods of wiring motors, motor starters, relays, and transformers are emphasized.
Course Hours Per Week: Class 4, M. Lab 6. Quarter Hours Credit 6.
Prerequisite: ELC 1111

ELN 1106 - Instrument Familiarization
Students will learn the functional use of various tools and test equipment used in the electrical field.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: None

ELN 1111 - Electro-Mechanical Relays and Symbols
This course is an introduction to various types of relays (AC and DC), operating principles and characteristics. Various relay symbols are introduced. Maintenance and construction of relays are studied.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: ELN 1106

ELN 1130 - Solid State Devices, Circuits, and Symbols
This course is an introduction to the theory and applications of solid state devices used in industry, especially solid state control circuits for motors and related equipment. Basic transistor circuits, vacuum tubes, and basic vacuum tube circuits are covered. Programmable control systems are examined and programmed.
Course Hours Per Week: Class 5, M. Lab 6. Quarter Hours Credit 7.
Prerequisites: ELC 1105, DFT 1104, ELN 1111

ENG 0080 - Basic Communication Skills
This course is designed to improve the student's basic English skills through concentrated work on usage, spelling, and fundamentals of grammar and punctuation. It emphasizes the writing of clear and mechanically correct sentences. Laboratory work may be required.
Course Hours Per Week: Class 5. Institutional Hours Credit 5. (Does not apply toward graduation.)
Prerequisite: None

ENG 1101 - Communication Skills
This course covers the basics of communication and their application to on-the-job activities. The student is introduced to memos, work estimates, work orders, necessary forms and records, and the writing of effective letters, including the application letter and resume. Emphasis is placed on descriptions and giving directions.
Course Hours Per Week: Class 2. Quarter Hours Credit 2.
Prerequisite: None

ENG 1102 - Communication skills
This course covers the task skills involved in preparing for and undergoing an interview for a job. It also covers visualizing concepts and data, finding references through library use, taking notes, and organizing, writing, and presenting orally a report related to the student's field of study.
Course Hours Per Week: Class 2. Quarter Hours Credit 2.
Prerequisite: ENG 1101

ENG 1103 - Grammar
This course will offer the student an opportunity to learn parts of speech, sentence structure, and paragraph formation, which will assist in improving communication and writing skills.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

FBG 1101 - Fiberglass Mold Making
Students will be introduced to the basics of constructing male and female molds for fiberglass production.
Course Hours Per Week: Class 4, M. Lab 9. Quarter Hours Credit 7.
Prerequisite: MSC 1112

HEA 1119 - First Aid
This course is designed to prepare a student for certification in first aid by the American Red Cross. The student will learn such things as: how to identify symptoms of certain diseases, how to identify poisonous plants, and how to handle common emergencies, etc.
Course Hours Per Week: Class 2. Quarter Hours Credit 2.
Prerequisite: None

MAS 1101 - Masonry
The history of the bricklaying and the masonry industry, raw materials, terminology, clay and shell brick, concrete block, mortar, laying foundations, cutting masonry materials, bonding, and the use, care, and maintenance of tools will be covered. Practice is given in selecting the proper mortars, layout, and construction of various building elements using brick and concrete block in order to develop skills in these areas.
Course Hours Per Week: Class 5, M. Lab 15. Quarter Hours Credit 10.
Prerequisite: None

MAT 1101 - Trade Mathematics
This course is designed to enhance the mathematical capabilities of each student. The general context of the course will be the coverage of the four basic operations working in the areas of whole numbers, common fractions, and decimals. The principles of prime numbers, dimensional analysis, percentage, ratios and proportions will also be covered. The course endeavors to use practical problems where possible.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: None

MAT 1102 - Trade Mathematics
This course further enhances the mathematical capabilities of the student through the study of powers and roots of numbers, solutions and manipulations of formulas, first and second degree equations, linear measure, areas and volumes of regular geometric figures. Practical word problems are used in all areas of study where applicable.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: MAT 1101

MAT 1122 - Machinist Mathematics I
This course is designed to acquaint the machinist with the mathematical tools most useful to the trade. The areas of Metric Measurement, Ratio and Proportion, Basic Trigonometry, and Fundamental Geometry are utilized in the light of practical machine trade problems.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: MAT 1102

MAT 1123 - Machinist Mathematics II
This is the second of two mathematic courses designed to acquaint the machinist with the mathematical tools most useful to the trade. The course will enhance the topics of the first course. The content herein will also cover the topics of indexing, Helix angles, angle measuring of various types, cutting speeds, plus some time in numerical control familiarization.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: MAT 1122

MAT 1125 - Industrial Calculations
This course is designed to improve the Industrial Electricity student's ability to solve problems relating to his or her field. Topics covered will include a review of series, parallel and combination circuits, power wire sizes, and lines losses. Also included will be mathematics related to alternating current fundamentals including square root, Pythagorean Theorem, and practical trigonometry. Specific problems related to the electrical code book will also be discussed when applicable.
Course Hours Per Week: Class 5. Quarter Hours Credit 5.
Prerequisite: MAT 1101

MDE 1101 - Marine and Diesel Engines Theory and Practice I
This course covers the principles of main propulsion of vessels, heavy equipment, and trucks employing internal combustion engines. Construction and various designs of the operational principles of two- and four-cycle internal combustion engines and their related piping systems, cooling, and lubrication are covered. Also, procedures for "lighting off" will be covered.
Course Hours Per Week: Class 2, M. Lab 12. Quarter Hours Credit 6.
Prerequisite: None

MDE 1101-A - Marine and Diesel Engine Theory and Practice I
This course covers introduction and various designs of the two- and four-cycle internal combustion engines.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MDE 1101-B - Marine and Diesel Engine Theory and Practice I
This course covers the principles of main propulsion of vessels, heavy equipment, and trucks employing internal combustion engine.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: MDE 1101-A

MDE 1101-C - Marine and Diesel Engine Theory and Practice I
This course will cover related parts of the cylinder block of the two- and four-cycle engine; lubrication and cooling will be covered in relationship to these parts.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: MDE 1101-B

MDE 1101-D - Marine and Diesel Engine Theory and Practice I
This course will cover the cylinder head and all the moving parts related to the two- and four-cycle engine including lubrication, cooling, and piping systems.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: MDE 1101-C

MDE 1102 - Marine and Diesel Engines Theory and Practice II
This course deals with two-cycle diesel engines that are used for propulsion of vessels and heavy equipment and trucks. In the construction and design of various two-cycle engines and their related system, cooling lubrication and air intake systems are covered. Procedure for "lighting off" and preventive maintenance will be discussed.
Course Hours Per Week: Class 3, M. Lab 12. Quarter Hours Credit 7.
Prerequisite: None

MDE 1103 - Marine and Diesel Engines Theory and Practice III
This course deals with the administration of gasoline and diesel engineering plants through the recording and filing of performance data. The course is also a continuation of two- and four-cycle engines, and rebuilding, which includes preventive maintenance and periodic checks of diesel engines. This course will cover in great detail troubleshooting of two- and four-cycle engines.
Course Hours Per Week: Class 3, M. Lab 15. Quarter Hours Credit 8.
Prerequisite: None

MDE 1104 - Marine and Diesel Power-Train Systems I
This course is a study of principles and functions of Marine and Diesel Power-Train Systems and disassembly and assembly of clutches, torque converters, torque dividers, fluid couplings, manual transmissions, planetary systems, and automatic transmissions.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MDE 1105 - Marine and Diesel Power-Train Systems II
This course is a study of principles and functions of Marine and Diesel Power-Train Systems and disassembly and assembly of marine gears, drive lines, final drives, differentials, and rear axles.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MDE 1108 - Gas and Diesel Fuel Systems I
This course provides a thorough study of the fuel systems of the marine and diesel engines, fuel pumps, carburetors, fuel injection pumps and air intake systems. Characteristics of fuels, types of fuel systems, special tools and testing equipment for the fuel systems of marine and diesel engines are studied.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

MDE 1109 - Gas and Diesel Fuel Systems II
This course is a continuation of the study of fuel systems injection pumps. Characteristics of fuels, types of fuel systems, special tools and testing equipment for the fuel systems of marine and diesel engines will be covered.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

MDE 1110 - Gas and Diesel Fuel System III
This course is a continuation of the study of fuel systems and injection pumps. Characteristics of the types of fuel systems, special tools, and test equipment for the fuel systems of marine and diesel will be covered.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

MEC 1101 - Machine Shop Theory and Practice
This course is an introduction to the machinist trade and the potential it holds for craftsmen. It deals primarily with the identification, care, and use of basic hand tools and precision-measuring instruments. Elementary layout procedures and processes of lathe, drill press, grinding (off-hand) and milling machines will be introduced both in theory and practice.
Course Hours Per Week: Class 3, M. Lab 15. Quarter Hours Credit 8.
Prerequisite: None

MEC 1101-A - Machine Shop Theory and Practice
This course is an introduction to the machinist trade and the potential it holds for craftsmen. Deals primarily with safety precautions in machine shops and introduction to machine tools.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MEC 1101-B - Machine Shop Theory and Practice
This course is an introduction to linear measurements, fractions, and decimals. Deals primarily with the identification, care, and use of basic hand tools and precision-measuring instruments.
Course Hours Per Week: Class 1, M. Lab 6. Quarter Hours Credit 3.
Prerequisite: None

MEC 1101-C - Machine Shop Theory and Practice
This course deals primarily with elementary layout procedures and processes of lathe, drill press, grinding (off-hand); milling machines will be introduced both in theory and practice.
Course Hours Per Week: Class 1, M. Lab 6. Quarter Hours Credit 3.
Prerequisite: None

MEC 1102 - Machine Shop Theory and Practice
Students will study advanced operations in layout tools and procedures, power sawing, drill press, surface grinder, milling machine, and shaper. The student will be introduced to the basic operations on the cylindrical grinder and will select projects encompassing all the operations, tools, and procedures thus far used and those to be stressed throughout the course.
Course Hours Per Week: Class 3, M. Lab 15. Quarter Hours Credit 8.
Prerequisite: MEC 1101

MEC 1103 - Machine Shop Theory and Practice
Students will study advanced work on the engine lathe, turning, boring and threading machines, grinders, milling machine and shaper. Course includes introduction to basic indexing and terminology with additional processes on calculating, cutting and measuring of spur, helical, gears and, wheels. The trainee will use precision tools and measuring instruments such as vernier height gages, protractors, comparators, etc. Basic exercises will be given on the turret lathe and on the tool and cutter grinder. Also, introduction to C.N.C. programming for turning and milling with digital readouts.
Course Hours Per Week: Class 3, M. Lab 15. Quarter Hours Credit 8.
Prerequisite: MEC 1102

MEC 1104 - Machine Shop Theory and Practice
Emphasis is placed on development of class projects using previously leamed procedures in planning, blueprint reading, machine operations, final assembly and inspection. Additional processes on the turret lathe, tool and cutter grinder, cylindrical and surface grinder, advanced milling machine operations, etc. Special procedures and operations, processes and equipment, observing safety procedures faithfully, and establishing good work habits and attitudes acceptable to the industry. Fundamentals in computer-controlled machine tool programs, operation, and setup. Heat treating of steel and steel alloys as it relates to the machinist is included in this course.
Course Hours Per Week: Class 4, M. Lab 12. Quarter Hours Credit 8.
Prerequisite: MEC 1103

MEC 1109 - Computer Controlled Machine Tools I
This course is an introduction to computerized numerical controlled machine tools. It deals primarily with numerical control and computerized numerical control machine tools as used in modem industry. The student will be introduced to simple part programs, setups, and operation of the computerized numerical control lathes and mills.
Course Hours Per Week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisite: MEC 1102 or permission of instructor

MEC 1110 - Computer Controlled Machine Tools II
Students will study and develop part programs for computer numerical control lathes and mills. Emphasis will be placed on programming, setup, and operation of computer numerical control lathes and mills. Also the student will be introduced to computer aided design and computer aided manufacturing (CAD-CAM) as used in modem industry.
Course Hours Per Week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisites: MEC 1103, MEC 1109

MEC 1113 - Shop Processes I
This course is a study of practices used in metalworking shops. Introduction to how materials can be utilized and to the processes of shaping, forming, and fabricating metals. Demonstration of the metalworking lathes, grinders, drills, milling machines, shapers, planers, saws, broachers, gear-cutting machines, and finishing machines. Students will study the capabilities of these machines.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisites: MEC 1127, MEC 1128

MEC 1114 - Shop Processes II
This course will cover the comparison of the unit-production and mass-production systems. Casting, forging and allied processes, welding and sheet metalworking processes are demonstrated and discussed. Mass-projection methods are studied in relationship to precision dimensional control.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: MEC 1113

MEC 1121 - Industrial Hydraulics I
This course covers the fundamentals of hydraulics and its uses in industry. A study of power transmission through hydraulics, the course will cover components and their function, pumps (gears and vanes), cylinders, and control valves.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MEC 1122 - Industrial Hydraulics II
A continuation of MEC 1121, this course will cover industrial hydraulic circuits and components including governors, valve control and instrument control in detail.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: MEC 1121

MEC 1127 - Industrial Mechanics I
This course is an introduction to the nature of work required of an industrial maintenance mechanic and his role in industry. It will deal with the identification, care, and use of basic hand tools used by a maintenance mechanic, including portable power tools and measuring devices. Also included are special tools and holding devices, methods of layout and fabrication, and threading and tapping. Benchwork such as filing, shaping, and forming metal parts will be practiced. OSHA standards will be stressed and will involve good housekeeping and shop safety.
Course Hours Per Week: Class 5, M. Lab 9. Quarter Hours Credit 8.
Prerequisite: None

MEC 1127-A - Industrial Mechanics I
This course is first of a four-part series. It is an introduction to the nature of work required of an industrial maintenance mechanic and his role in industry. Instruction will cover hand tools and measuring devices. Safety and housekeeping will be stressed.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MEC 1127-B - Industrial Mechanics I
This course is an introduction to hand tools, their identification, care, and use. Power tools will be discussed and explained. Measuring devices will be used and explained in detail. Drilling and taping will be discussed.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MEC 1127-C - Industrial Mechanics I
This course will introduce the student to threading systems, taps, dies, and drill sizes. Holding devices will be discussed.
Course Hours Per Week: Class 1, M. Lab 3, Quarter Hours Credit 2.
Prerequisite: None

MEC 1127-D - Industrial Mechanics I
This course is an introduction to bench work. Filing, shaping, and forming metal parts will be covered. General shop practices and methods of layout will be discussed. Work order types and forms will be covered.
Course Hours Per Week: Class 2. Quarter Hours Credit 2.
Prerequisite: None

MEC 1128 - Industrial Mechanics II
This course is a study of the various types of industrial piping systems and plumbing fixtures. It will cover types of pipe and fittings, methods of installation and repair, and include threading and pipefitting. Valves and other plumbing fixtures will be covered with emphasis on installation service and repair of existing systems.
Course Hours Per Week: Class 5, M. Lab 9. Quarter Hours Credit 8.
Prerequisite: None

MEC 1129 - Industrial Mechanics III
This course will cover the installation, repair, and servicing of mechanical power transmission equipment, including gears, belts, and roller chains. Basic rigging procedures and use of jacks, chain falls, and floor lifts will be covered. Emphasis will be on troubleshooting and routine maintenance tasks normally performed by the industrial mechanic.
Course Hours Per Week: Class 4, M. Lab 6. Quarter Hours Credit 6.
Prerequisite: None

MEC 1130 - Industrial Mechanics IV
This course will cover centrifugal and positive displacement type pumps and their principles of operation and theory. Training in assembly, parts replacement, packing and mechanical seal installation will be covered. Emphasis will be placed on motor pump alignment.
Course Hours Per Week: Class 5, M. Lab 9. Quarter Hours Credit 8.
Prerequisites: MEC 1127, DFT 1104

MRO 1101- Rules of the Road and Piloting
This course is a study of basic piloting techniques to enable the student to navigate a vessel using aids to navigation, charts, instruments, and nautical publications. A thorough coverage of the nautical "rules of the road" for preventing collisions is also presented.
Course Hours Per Week: Class 1, Lab 6. Quarter Hours Credit 4.
Prerequisite: None

MRO 1102 - Electronic Aids to Navigation
This course provides the student with information on the operations, concepts, and capabilities of shipboard electronic equipment used for navigation, communication, oceanography, and fishery operations. Topics include: radio wave theory, LORAN, Omega, satellite navigation, direction finding, gyrocompass, depth finding, and marine radio communications.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MRO 1106 - Practical Marine Engineering I
The student will learn basic theory of engines and hydraulics through lectures and lab work. Also, he or she will become familiar with watchstanding in the engine department and the operation of deck equipment. On cruises he or she will perform the duties of the watch, plus under close supervision, he or she will operate the winches for setting and hauling nets.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MRO 1107 - Practical Marine Engineering II
The student will learn in detail the internal working of high and medium speed diesel engines. The repair of hydraulic systems will also be covered. The student will receive an introduction to refrigeration. More responsibility will be assumed by the student during his or her engineering watches.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4.
Prerequisite: MRO 1106

MRO 1108 - Practical Marine Engineering III
The student will learn the maintenance and repair of refrigeration equipment. The design of hydraulic systems will be covered and through field trips he or she will see how the systems work on local fishing vessels. Also, vessel haul out will be covered by classroom work and trips to marine railway to view actual work being done.
Course Hours Per Week: Class 1, Lab 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: MRO 1107

MRO 1115 - Towboat Operations
A comprehensive study by theoretical and practical means of methods employed by towing vessels in ocean and inland towing. Subject material will include the following: towing astern and alongside, pushing ahead, docking tugs, making and breaking the tow, applicable navigation rules, salvage and rescue work, and multiple tows.
Course Hours Per Week: Class 2, M. Lab 6. Quarter Hours Credit 4.
Prerequisite: None

MRO 1139 - Rigging and Seamanship
Fibers, synthetics, and wire ropes are studied with emphasis on strength, proper handling, and storage. The types of splicing used in fiber and wire slings will be demonstrated. Block and tackle combinations and mathematical formulas used to lift given weights will be taught in this course.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MRO 1140 -Marine Safety-First Aid,Lifeboat Drills,and Firefighting Aboard ship
This course is a presentation of essential elements of ship safety covering firefighting, first aid, accident prevention, abandon ship procedures, lifesaving, and survival at sea. Emphasis is placed on emergency drills and adherance to U.S. Coast Guard regulations.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

MSC 1110 - Boat Building I
This course introduces the student to the safe and proper handling of power and hand tools in the boat shop. The sharpening, maintenance, and necessary adjustment of tools is stressed so that the student can realize optimum results from the equipment. Also, the student will be introduced to lofting and building a simple flat bottomed boat.
Course Hours Per Week: Class 5, M. Lab 12. Quarter Hours Credit 9.
Prerequisite: None

MSC 1111 - Boat Building II
More advanced hull development will be approached in this course. A jig is constructed from plans that could be used to build a single fiberglass or wooden boat, or a plug from which a mold could be made. The student is introduced to modern fabrics, core materials, and resins used in the fiberglass industry.
Course Hours Per Week: Class 4, M. Lab 12. Quarter Hours Credit 8.
Prerequisite: MSC 1110

MSC 1112 - Boat Building III
This course will introduce the student to wood and glass lamination techniques. The students will build a small sandwich core fiberglass boat and practice the fairing process, as well as the application of modern marine finishes.
Course Hours Per Week: Class 3, M. Lab 12. Quarter Hours Credit 7.
Prerequisite: MSC 1111

MSC 1114 - Marine Fishery Science and Seafood Handling
This course involves study of identification and classification of commercial marine fishes. General understanding of life cycles, population changes, and distributions as influenced by environmental factors is stressed. Additional study will be given in fish identification and fish tagging methods with and introduction to aquaculture and controlled rearing of commercially important marine species as a profitable business. Description of fisheries, fishing methods, fishing equipment, and methods of fish preservation will be covered.
Course Hours Per Week: Class 2, Lab 2. Quarter Hours Credit 3.
Prerequisite: None

MSC 1141 - Navigation
This course is an advanced navigation course to expand on material covered in MRO 1101. Topics include: use of the maneuvering board for collision avoidance, an introduction to celestial navigation, calculator navigation, voyage planning, fuel consumption, and advanced piloting techniques.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisiste: MRO 1101

NUR 1101 - Nursing Skills
The course has been developed to introduce the student to basic nursing skills, nursing procedures, and nursing care. Beginning skills are developed through planned laboratory experiences, hypothetical patient situations, and related practice in actual patient care.
Course Hours Per Week: Class 4, Lab 2, Clinical 3. Quarter Hours Credit 6.
Prerequisite: None

NUR 1102 - Medical-Surgical Nursing I
This course has been developed to help the student analyze nursing needs of patients. Needs arising from the individuality of the patient and from the illness condition are evaluated. Related information is presented as it is relevant to the student's understanding of and ability to meet nursing needs of patients. Clinical activities provide selected experiences in patient care in order for the student to develop skill in applying classroom learning to a variety of patient situations.
Course Hours Per Week: Class 5, Lab 2, Clinical 6. Quarter Hours Credit 8.
Prerequisites: BIO 1001, BIO 1002, ENG 1103, NUR 1101, NUT 1101, PSY 1101

NUR 1103 - Pediatrics
This course is designed to include two parts. Part I was developed to give the student an understanding of many of the common illnesses of children, and Part II was designed to help the student understand the needs of the acutely ill child, including the abused child, the child with burns, the child with fractures, and the child with acute or chronic poisoning problems. Clinical activities are provided in order for the student to develop skill in caring for the sick child.
Course Hours Per Week: Class 5, Clinical 9. Quarter Hours Credit 8.
Prerequisites: BIO 1001, BIO 1002, ENG 1103, NUR 1101, NUT 1101, PSY 1101

NUR 1104 - Obstetrics
This course has been developed to give the student an understanding of the fundamentals of maternity nursing. The student will be expected to review normal anatomy and physiology of the reproductive system as well as the other systems that play roles in obstetric nursing. The student will have an opportunity to assist with pre-natal visits, observe in labor and delivery, participate in caring for mothers and babies in a modified rooming in situation, and observe in the special care nursery. Selected clinical experiences will enable the student to better apply classroom learning.
Course Hours Per Week: Class 6, Clinical 12. Quarter Hours Credit 10.
Prerequisites: NUR 1102, NUR 1103, PSY 1102

NUR 1105 - Pharmacology
This course is designed to assist the student in learning how to give medications safely. Care will be given in teaching conversion methods using household, apothecary, and metric measurements. Basic skills will be taught in administering medications. Demonstrations by instructors and return demonstrations by students will be done in a lab facility. Information related to medications and their use with specific illnesses will be given and the student will apply this knowledge when giving patient care.
Course Hours Per Week: Class 5, Lab 2, Clinical 6. Quarter Hours Credit 8.
Prerequisites: NUR 1102, NUR 1103, PSY 1102

NUR 1106 - Medical-Surgical Nursing II
This course has been designed to assist the student in acquiring knowledge of common disease conditions and in giving safe and effective nursing care to patients with specific needs arising from illness and/or therapy. The content of the course spans two quarters so that the student will have ample time for clinical experiences in nursing patients with conditions which illustrate classroom learning. The grade for this course will be given at the end of the fourth quarter.
Course Hours Per Week: Class 7, Lab 2, Clinical 9. Quarter Hours Credit 11.
Prerequisites: NUR 1104, NUR 1105

NUR 1107 - Medical-Surgical Nursing III
This course is designed to assist the advanced practical nursing student to acquire knowledge of the needs of the seriously ill patient and to develop skills in assisting the registered nurse and/or the doctor in complex nursing situations. The student will also be assisted in making the transition to the role to be assumed after graduation. Clinical activities will consist of selected experiences with the seriously ill patient, an overview of community nursing with the public health nurse, a first aid course, and emergency room nursing.
Course Hours Per Week: Class 4, Clinical 6. Quarter Hours Credit 6.
Prerequisites: NUR 1105, NUR 1106

NUT 1101- Nutrition and Diet Therapy
This course has been developed to introduce the student to normal nutrition and to the diets used in the care of patients. The course begins with an in-depth study of the digestive system. A thorough view of all the nutrients with emphasis placed on food sources is given. Therapeutic diets that are most often used for specific conditions are also discussed. The student is expected to visit a grocery store and price various staple goods and then plan a menu for a family. Throughout the year, diet therapy continues to be stressed in patient care.
Course Hours Per WeeK: Class 4. Quarter Hours Credit 4.
Prerequisite: None

PHY 1101 - Applied Science
This course is an introductory study of the properties of materials and the principles of electricity and magnetism. Topics included are measurement, solids, liquids, gases, electric circuits, electromagnetism, simple machines, and systems of measurement. This course is a lab course to furnish hands-on experience.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: None

PHY 1102 - Applied Science
A continuation of PHY 1101, this course views the simple machines along with power, energy, motion, and mechanical advantage. This is a lecture and lab course mainly designed for mechanical emphasis.
Course Hours Per Week: Class 3, Lab 2. Quarter Hours Credit 4.
Prerequisite: PHY 1101

PLU 1101 - Basic Plumbing
This course is designed for the Light Construction curriculum and is a study of the various types of residential piping systems and plumbing fixtures. It will cover types of pipe and fittings, methods of installation and repair, and include threading and pipefitting. Valves and other plumbing fixtures will be covered with emphasis on installation service and repair of existing systems.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

PME 1101 - Internal Combustion Engines
This course promotes the development of a thorough knowledge and ability in using, maintaining, and storing the various hand tools and measuring devices needed in engine repair work. It includes a study of the construction and operation of components of internal combustion engines, as well as the testing of engine performance, servicing and maintenance of pistons, valves, cams and camshafts, fuel and exhaust systems, cooling systems, proper lubrication, methods of testing, and diagnosing and repairing.
Course Hours Per Week: Class 3, M. Lab 15. Quarter Hours Credit 8.
Prerequisite: None

PME 1102 - Engine Electrical and Fuel Systems
A thorough study of the electrical and fuel systems of the automobile is made, including battery cranking mechanism, generator, ignition, accessories, and wiring, fuel pumps, carburetors, and fuel injectors. Characteristics of fuels, types of fuel systems, special tools, and testing equipment for the fuel and electrical system are also covered.
Course Hours Per Week: Class 5, M. Lab 15. Quarter Hours Credit 10.
Prerequisite: None

PME 1102-A - Engine Electrical and Fuel Systems
This course is a study of the automotive electric system and wiring system to include, alternators and automotive accessory systems. Students learn how to troubleshoot and repair these systems using special tools and testing equipment designed especially for automotive electrical diagnosis and repairs.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

PME 1102-B - Engine Electrical and Fuel Systems
This course is a study of the automotive cranking system to include starters, starter solenoids, ignition switch, drive mechanism, the neutral safety switch, and wiring which connects the components.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

PME 1102-C - Engine Electrical and Fuel Systems
This course is a study of the automotive battery and how it supplies current to operate the starting motor and the ignition system when the engine is being started and how the battery uses chemicals to produce electricity (D.C. electricity).
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

PME 1102-D - Engine Electrical and Fuel Systems
This course is a study of the automotive fuel systems, fuel storage, and supply systems; topics include carburetor and fuel injection, fuel pumps, (mechanical and electrical), fuel tank, filters, and fuel lines. Students learn how to troubleshoot and repair these systems, using special tools and equipment designed especially for automotive fuel systems diagnosis and repair.
Course Hours Per Week: Class 2, M. Lab 6. Quarter Hours Credit 4.
Prerequisite: None

PME 1131 - Schematics and Diagrams: Marine and Diesel
This course covers the interpretation and reading of blueprints. It promotes the development of ability to read and interpret blueprints, charts, instruction and service manuals, and wiring diagrams. Information on lines, views, dimensioning procedures, and notes will be covered.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

PME 1136 - Fundamentals of Hydraulics
The fundamentals of hydraulics and its use to transmit power are studied, including the following components and their function: pumps, lines, cylinders, valves, gauges and controls. Proper care, use, installation and storage of test equipment, minor repairs, assembly, removal and replacement of equipment are also covered.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: None

PSY 1101 - Human Relations
This is a study of basic principles of human behavior. The problems of the individual are studied in relation to society, group membership, and relationships within the work situation.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

PSY 1102 - Growth and Development
This course has been designed to give the student an understanding of normal growth and development including the ages and stages of personality development. The student will have an opportunity to view normal growth and development in the community by visiting a day-care center and nursing homes.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisites: BIO 1001, BIO 1002, ENG 1103, NUR 1101, NUT 1101, PSY 1101

SHI 1101 - Ships' Equipment, Maintenance, and Repair I
This course will include the actual experience and instruction on maintenance and repairing of equipment used in marine environment.
Course Hours Per Week: Class 3, M. Lab 6. Quarter Hours Credit 5.
Prerequisite: None

SHI 1102 - Ships' Equipment, Maintenance, and Repair II
This course covers in more detail than SHI 1101 the theory and practice of marine equipment maintenance. Subject material will include paints and painting, canvas work, ground tackle, and steering gear. There will be continuous practice in the operation of the school's fleet of small vessels.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4.
Prerequisite: SHI 1101

SHI 1103 - Ships' Equipment, Maintenance, and Repair III
More detailed aspects of the practice of marine equipment maintenance are covered in this course. Topics include ship sanitation, deck machinery maintenance, specialized marlinspike seamanship, boat hull repair, and special considerations for the tankerman. Operation of the small vessel fleet will continue with emphasis on boat handling in non-routine situations.
Course Hours Per Week: Class 2, Lab 4, M. Lab 3. Quarter Hours Credit 5.
Prerequisite: SHI 1102

SHI 1104 - Ships' Equipment, Maintenance, and Repair IV
The ultimate consideration in ship maintenance is the preservation of watertight integrity. This course probes the critical subject of ship stability, a responsibility normally assigned to an officer. Also, the student will learn damage control measures such as shoring, emergency pumping, jettisoning of cargo, and suppression of free surface. Operation of the small vessel fleet will continue with emphasis on boat handling in emergency situations.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4.
Prerequisite: SHI 1103

SOC 1112 - Families in American Culture
The student will examine the characteristics, problems, and issues of families in American culture. Emphasis will be on ethnic families. Special attention will be given to programs designed for the culturally and/or educationally deprived child.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

WLD 1101 - Basic Welding
Emphasis is placed on welding demonstrations by the instructor and practiced by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment are stressed. Practice will be given for arc welding and flame-cutting methods applicable to mechanical repair work.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

WLD 1102 - Basic Welding
Emphasis is placed on welding demonstrations by the instructor and practiced by students in the welding shop. Safe and correct methods of assembling and operating the welding equipment are stressed. Practice will be given for arc welding and flame-cutting methods applicable to mechanical repair work.
Course Hours Per Week: M. Lab 3. Quarter Hours Credit 1.
Prerequisite: None

WLD 1106 - Welding and Burning I
This course involves welding demonstrations by the instructor and practiced by students in the welding shop. The metallurgy of welding is discussed, as are safe and correct methods of assembling and operating the welding equipment. Practice will be given for surface welding and flame-cutting. Emphasis is placed on electric arc and gas welding methods applicable to mechanical repair work. Brazing is also covered.
Course Hours Per Week: M. Lab 6. Quarter Hours Credit 2.
Prerequisite: None

WLD 1107 - Welding and Burning II
This course is a continuation of WLD 1106, giving the students additional practice in arc welding which will improve their efficiency as a welder. Emphasis will be on safety and use of arc and gas welding equipment. Practice will include oxyacetylene welding, brazing, soft solder and silver solder as needed in mechanical, ship and dock repair work. Also, there will be a demonstration, by instructor, of Tig, Mig, and Plasma welding.
Course Hours Per Week: M. Lab 6. Quarter Hours Credit 2.
Prerequisite: WLD 1106

WLD 1119 - Basic Arc Welding and Oxy-fuel Cutting
Emphasis is placed on the operation of the different types of AC and DCn welding machines, and maintenance of welding machines. Studies are made on welding heats, polarities, and different types of welding electrodes used in joining various types of metals in the arc welding process. The set up and use of oxy-fuel cutting equipment is studied. After the student is capable of setting up welding equipment, practice weld beads will be made in all positions. Safety procedures are emphasized throughout the course in the use of tools and equipment.
Course Hours Per Week: Class 7, M. Lab 9. Quarter Hours Credit 10.
Prerequisite: None

WLD 1119-A - Basic Arc Welding and Oxy-Fuel Cutting
This course will cover the operation of the different types of AC and DC welding machines, and maintenance of welding machines. Studies are made of welding heats, polarities, and different types of welding electrodes. After the student is capable of setting up welding equipment, practice weld beads will be made in the flat and vertical positions.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

WLD 1119-B - Basic Arc Welding and Oxy-Fuel Cutting
Further studies are made on different types of welding electrodes used in joining various types of metals in the shielded metal arc welding process. The setup and use of oxy-fuel cutting equipment is learned. Practice cuts will be made. Various cutting equipment and practice welds will be made in the overhead and horizontal positions with safety emphasized throughout.
Course Hours Per Week: Class 1, M. Lab 3. Quarter Hours Credit 2.
Prerequisite: None

WLD 1119-C - Basic Arc Welding and Oxy-Fuel Cutting
This course will cover the maintenance of welding machines and oxy-fuel cutting equipment, cutting of steel to measured lengths and cutting bevels on plate steel, and making fillet welds and butt welds in all positions. Safety is emphasized throughout the course.
Course Hours Per Week: Class 2, M. Lab 3. Quarter Hours Credit 3.
Prerequisite: None

WLD 1119-D - Basic Arc Welding and Oxy-Fuel Cutting
Further studies of electrical current AC and DC, welding electrodes and fluxes, welding machines, oxy-fuel cutting equipment, gases, and different types of steel will be covered.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: None

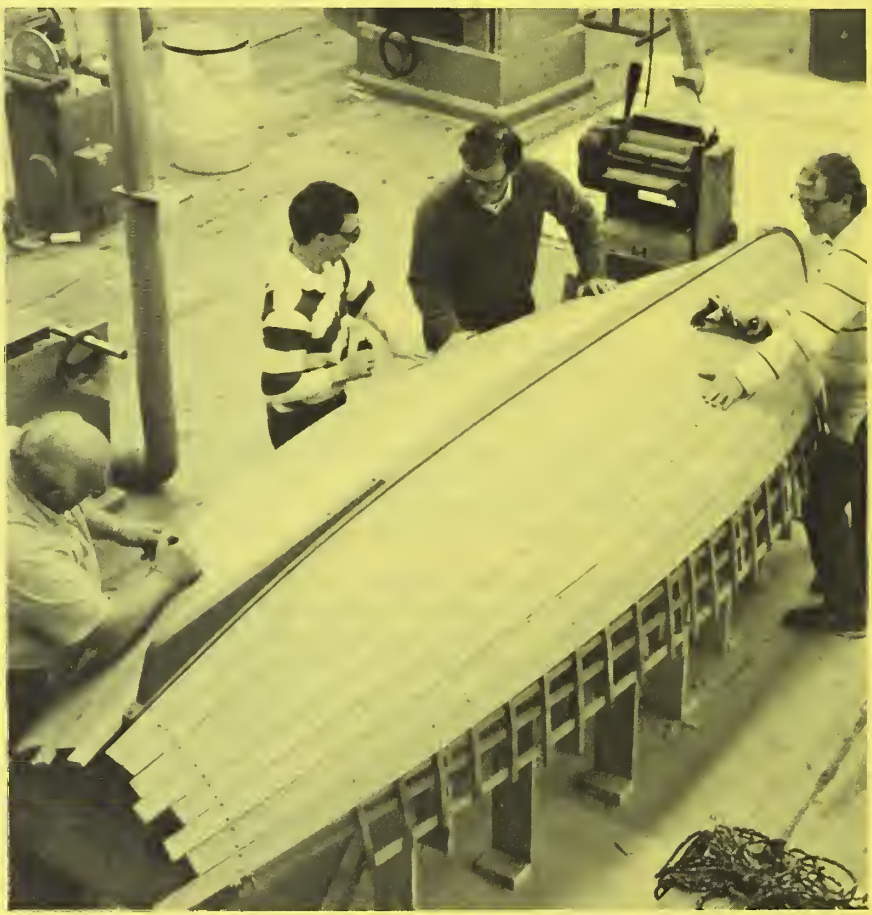
WLD 1122 - Commercial and Industrial Practices
This course is designed to build skills through practices in simulated industrial processes and techniques: sketching and laying out on paper the size and shape description, listing the procedure steps necessary to build the product, and then actually following these directions to build the product. Emphasis is placed on maintenance, repairing worn or broken parts by special welding applications, field welding, and nondestructive testing and inspection.
Course Hours Per Week: Class 3. Quarter Hours Credit 3.
Prerequisite: WLD 1119 or WLD 1127

WLD 1123 - Inert Gas Welding (Tig, Mig, and Plasma)
This course is an introduction and practical operations in the use of inert gas arc welding. A study will be made of the equipment, operation, safety, and practice in the various positions. A thorough study of such topics as principles of operation, shielding gases, filler rods, process variations and applications, and manual and automatic welding.
Course Hours Per Week: Class 7, M. Lab 6. Quarter Hours Credit 9.
Prerequisite: WLD 1119 or WLD 1127

WLD 1124 - Pipe Welding
This course is designed to provide practice in the welding of pressure piping in the horizontal, vertical and horizontal-fixed position using shielded metal arc welding processes according to Sections VIII and IX of the ASME code.
Course Hours Per Week: Class 4, M. Lab 6. Quarter Hours Credit 6.
Prerequisites: WLD 1122, WLD 1123

WLD 1125 - Certification Practices
This course involves practice in welding the various materials to meet certification standards. The student uses various tests including the guided bend and the tensile strength tests to check the quality of his or her work. Emphasis is placed on attaining skill in producing quality welds.
Course Hours Per Week: Class 3, M. Lab 3. Quarter Hours Credit 4.
Prerequisites: WLD 1122, WLD 1123

WLD 1127 - Advanced Arc Welding
This course will be a continuation of WLD 1119 in order to give the student additional practice in welding plate steel of all thickness and in all positions to American Welding Society Codes. All safety procedures will be emphasized throughout the course. This course will enable the student to be better prepared to pass welding tests in industry and become a certified welder.
Course Hours Per Week: Class 7, M. Lab 9. Quarter Hours Credit 10.
Prerequisite: WLD 1119



EXTENSION AND GENERAL ADULT EDUCATION DIVISION

CONTINUING EDUCATION

Cape Fear Community College provides training in numerous areas through its Continuing Education programs. Classes are held at the College and at various locations throughout New Hanover and Pender counties. Classes are designed to prepare individuals for employment and to upgrade workers already employed; in addition, classes are also designed to improve an adult's economic, social and cultural standing.

The Continuing Education Division also provides training for employees of area industries and public agencies. Once a need has been established, training can be offered at any time. Full details can be obtained by contacting the Dean of Continuing Education.

Admission Requirements
Generally, any individual who is 18 years of age or whose high school class has graduated is eligible for admission to continuing education classes. Applicants are usually admitted on a first come, first served basis. Some classes may have specific admission requirements. In such cases, applicants will be properly notified.

Expenses
Many of the continuing education classes are offered without charge to the students. In other classes, a $15.00 tuition fee is charged for occupational courses, and a $20.00 fee is charged for practical skill courses and avocational courses. Persons 65 years or older will be exempt from fees provided there is available space. In special cases, larger fees and/or additional fees may be charged.

Certificates
The Continuing Education Division issues certificates to those who complete a course satisfactorily.

Continuing Education Courses
The Continuing Education Division offers courses in the following categories:

Academic	Avocational
Occupational	Upgrading Training for Industry
Practical Skill	Public Health and Safety (EMT, Fire, Rescue)

The types and frequency of these offerings are determined by the demand and interest in a given area of study. A sampling of courses under this heading would include:

Law for the Layman	Remedial English
Creative Art	Auto Mechanics
Computer Applications	Quilting
Manual Language	Auto Body Repair
Homemaking - Sewing and Food Preparation	

Additional courses are offered as the demand becomes evident. Details of these and other courses may be obtained from the Director of Continuing Education.

HUMAN RESOURCES DEVELOPMENT PROGRAM

The Human Resources Development Program (HRD) is designed to provide carefully structured pre-vocational training/counseling and assistance in placement into permanent employment or further educational training for chronically unemployed and underemployed adults.

The primary objective of HRD is to help the jobless trainees reorient themselves to the world of work through recognition of self-assets and limitations, understanding the effect of his/her behavior on others, familiarization with problem-solving processes, and development.

HRD is the only educational program in the community college system which requires a one-year follow-up of program graduates. Since its introduction into the community college system, HRD has been the only tax supported educational program (in the public school, university, or community college systems) which is funded on the basis of performance.

For further information concerning the program, please contact Human Resources Development, Cape Fear Community College.

ADULT EDUCATION

The Adult Education Division of Cape Fear Community College is primarily concerned with raising the educational level of adults. The College is prepared to provide training at all educational levels from grade one (learning to read and write) up through high school equivalency. This training is provided through organized classes and through the school's Programmed Instruction Center.

Classes in adult education are organized as follows:

Adult Basic Education I - For those adults who have completed less than four grades of formal education.

Adult Basic Education II - For those adults who have completed grades 5-8 or who have completed ABE I.

High School Equivalency (GED) - For adults who want to complete their high school education.

The Programmed Instruction Center provides training for those who are not able to attend the organized classes. See Programmed Instructor Center.

Admission Requirement

Any adult who has a desire to raise his or her educational level and who is able to benefit from a course may enroll in the adult education classes.

Expenses

There is no charge for the Adult Basic Education classes and only a small fee to cover the cost of instructional materials in the high school equivalency classes. The Programmed Instruction Center is also free.

High School Equivalency Certificate

The State of North Carolina, through the State Board of Education permits adults (18 years of age) to take the General Educational Development Tests, (generally referred to as "the High School Equivalency Examination" GED) at test centers throughout the State. Persons who make satisfactory scores on all five sections of the test are issued the High School Equivalency Certificate by the State Board of Education. This certificate is recognized by most industries, schools, and government agencies as meeting their requirement for a high school education. Cape Fear Community College is a GED test center. The test is generally given three times each month; applications for the tests may be obtained from the College or from the office of any school superintendent.

The College provides training in the five areas covered by the examination both through organized classes and the Programmed Instruction Center.

NEW INDUSTRY TRAINING

One of the basic objectives of Cape Fear Community College is to stimulate the creation of more challenging and rewarding jobs for the people of our area by providing a customized training service to new and expanding industries. Subject to only minimal limitations, this Institution, in cooperation with the Industrial

Services Division of the State Department of Community Colleges, will design and administer a special program for training the production manpower required by any new or expanding industry creating new job opportunities in North Carolina.

This program includes the following services:

1. Consultation in determining job descriptions; defining areas of training; and in prescribing appropriate course outlines, training schedules, and materials.
2. Selecting and training of instructors. These instructors may be recruited from the company and from outside sources.
3. Payment of instructors' wages for the duration of the training program.
4. Provision of suitable space for a temporary training facility prior to the completion of the new plant, should such temporary space be required. This may be space with Cape Fear Community College or leased space in the community.
5. Assumption of installation costs of equipment in the temporary training facility.
6. Payment for one-half the cost of nonsalvageable materials expended in the training program.

The purpose of this service is to help a new or expanding industry meet its immediate manpower needs and to encourage each industry to develop a long-range training program of its own to satisfy its continuing replacement and re-training needs.

For further details of this service, contact the President of Cape Fear Community College, Wilmington, North Carolina, or the Director of the Industrial Services Division, North Carolina Department of Community Colleges, Raleigh, North Carolina.

PROGRAMMED INSTRUCTION CENTER

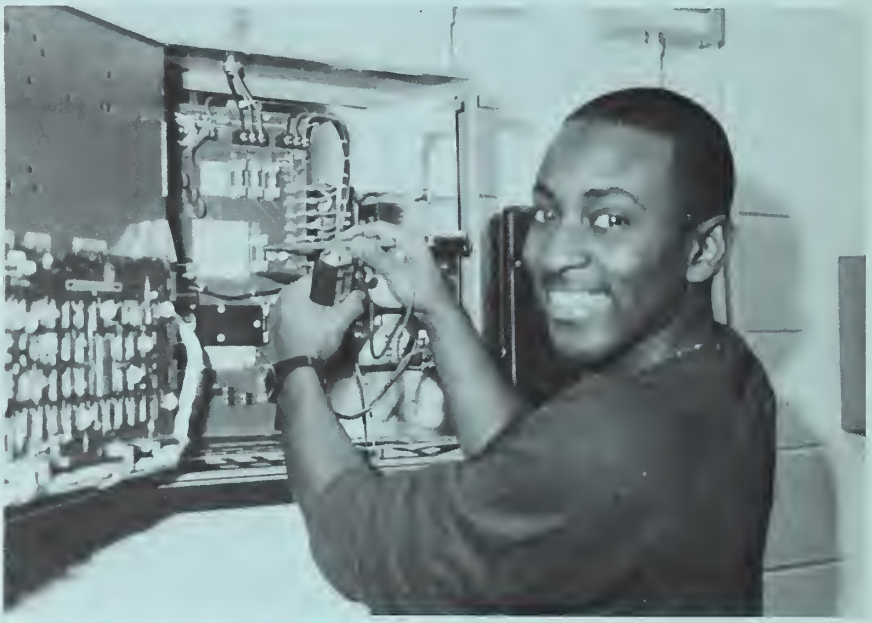
The Programmed Instruction Center is an individualized, self-study center offering courses in many fields. It is open Monday through Friday from 8:00 AM to 8:00 PM. Coordinators are available to assist students with their studies. There are no schedules or homework, and students may enroll at any time.

Admission Requirements
Age: 18 years or older
Prerequisites: None

Expenses
Tuition or Fees: None

Programs of Study

1. College Prep - Review math, reading, English or other subjects before entering or while attending a community college or other college.
2. High School Equivalency Prep - Course work is offered for the five areas on the exam - English, social studies, science, reading, and math. The GED is given monthly. The GED pretest is also given in the lab.
3. Prepare for college entrance tests (SAT), Graduate Record Exam (GRE), National Teacher Exam (NTE), Armed Forces Vocational Aptitude Battery (ASVAB), and other standardized tests.
4. Job Training and Upgrading - Bank Teller Training and business courses.
5. Foreign Languages - Spanish, French, German, Italian, and others.
6. General Studies - A partial list includes reading comprehension, phonics, English, vocabulary, spelling, arithmetic, algebra, geometry, business math, and real estate math.




CASCADE 3

ADMINISTRATION, FACULTY, AND STAFF

ADMINISTRATION

E. Thomas Satterfield, Jr., Ed.D., President

Roy L. Barnhill ..... Librarian
James D. Bartlett ..... Assistant to President
Henry J. Bethea ..... Evening Registrar
Stephen J. Beuth ..... Ship's Captain
Thomas J. Bradshaw ..... Acting Director, Continuing Education
Deborah G. Britt ..... Bookkeeper
Ernest D. Bryant, Jr. ..... Director, Continuing Education
Stephen R. Burtt ..... Director of Fiscal Affairs
James Canty, Jr. ..... Coordinator, Programmed Instruction Center
William A. Crawford ..... Librarian
Ada B. Davis ..... Public Relations
Brenda J. Davis ..... Counselor
John L. Dew, Jr. ..... Dean of Fiscal Affairs
Charlotte W. Dexter ..... Personnel Director and Programmed Instruction Center Director
Matthew C. Donahue ..... Dean of Instruction
Kathy P. Garris ..... Administrative Assistant for Board Affairs
Maurice C. Haynes ..... Supervisor of Maintenance
Gayle P. Harvey ..... Director of Small Business Center
Danny H. Hickman ..... Acting Dean of Continuing Education
Marvin E. Huddleston ..... Director of Purchasing
Charles F. Hunnicutt ..... Director of Admissions
Gregory L. Kennedy ..... Acting Director, Continuing Education
John R. Kennedy ..... Dean of Evening Programs
Willie B. McGough, Jr., Ed.D. ..... Audio Visual Librarian
Carl E. Malpass ..... Dean of Student Affairs
Charles W. Miller ..... Evaluator/Coordinator, Disadvantaged and Handicapped Programs
Gwendolyn W. Murray ..... Personnel Benefits Specialist
James R. Nunn, Jr. ..... Assistant Dean of Instruction
Mark D. O'Neal ..... Director, Continuing Education
David J. Pate ..... Assistant to the Dean of Student Affairs
Nell R. Pavelchak ..... Director, Continuing Education

Naomi Randolph ..... Director, Financial Aid
Mary B. Rea-Poteat, Ed.D. ..... Director of Career Planning, Placement, and Testing
David C. Seeger ..... Acting Assistant Dean of Instruction
Clarence L. Smith ..... Director of Human Resources Development
O. Rick Stewart ..... Director of Student Activities
Barbara R. Yount ..... Director, Continuing Education
Christopher K. Zingelmann ..... Registrar

VISITING ARTIST

Steven Henegar ..... Storyteller

FACULTY

Gwendolyn M. Armstrong ..... Business Education
James A. Bailey ..... Criminal Justice
Sherry L. Batchelor ..... Business Education
Chauncey W. Batts, Division Director ..... Engineering
Benjamin A. Bowie ..... Machine Shop
Paul T. Bowie ..... Industrial Maintenance
Vivian M. Boykin ..... English/Related
Raymond P. Brandi ..... Marine Science
Ladson W. Bright ..... English
Dale R. Buck ..... Chemical Technology
Charles G. Buis ..... Drafting
Katie G. Canty, Ed.D. ..... Business Education
Orangel J. Daniels ..... English
Mary B. Dowless ..... Business Education
Sandra Z. DuMond, Division Director ..... Public Services
Thomas E. Fields ..... Law Enforcement
David W. Flagler ..... Boat Building
Edward L. Foss, Division Director ..... Marine Science
Byron C. Geary ..... Marine Diesel Mechanics
John C. Gonzalez ..... Electronics
Alexander F. Grant ..... Welding
Faye B. Hankins ..... Business Education
Edward B. Higgins, Jr. ..... Paralegal
Russel L. Holt ..... Electronics
J. Randy Johnson ..... Machine Trades
Philip C. Jorgensen ..... Related
Richard C. Kellagher ..... Related

Thera S. Lanier ..... Adult Basic Education
Charles S. Lapsansky ..... Electronics
Roy Lee McClelland ..... Marine Navigation
Delmar A. McGowan, Jr. ..... Drafting
William A. Mangum ..... Mathematics
James R. Martin ..... Biology
Donald C. Miller, Ed.D. ..... Social Science
Mark V. Miller ..... Marine Related
Gwendolyn G. Morris ..... Sheltered Workshop
Oscar A. Nelson ..... Air Conditioning, Heating, and Refrigeration
Angelo J. Parlatore ..... Automotive Mechanics
Gene B. Poe ..... Mathematics
Henry R. Price ..... Marine Electronics
Susan P. Rae ..... Computer Services
Pearl R. Rowell ..... Social Science
Robert N. Russell ..... Law Enforcement
Robert W. Sessoms, Division Director ..... Business Education
Wayne P. Simmons ..... Electronics
David L. Smith ..... Light Construction
Melvin W. Snow ..... Mathematics
Joel S. Spencer ..... Drafting
James A. Tallant ..... Business Education
Donald L. Taylor ..... Electronics
Frances A. Teachey ..... Sheltered Workshop
John D. Thomas ..... Industrial Electricity
Aubrey C. Thompson, Jr., Division Director ..... Electronics
Joyce L. Thornton ..... English
Donna S. Tolley ..... Developmental Studies
Roland E. Tyndall ..... Business Education
Richard E. West ..... Welding
Alvin R. Williams ..... Welding

SUPPORT PERSONNEL

Joseph G. Batson ..... Ship's First Assistant Engineer
Bethanie Benson ..... Library Clerk
Darlene W. Buck ..... Executive Secretary to the Dean of Student Affairs
Donald R. Burris ..... Ship's Cook
Carolyn F. Carter ..... Secretary for Continuing Education
June M. Caulder ..... Secretary for Continuing Education

Mary Ann Deal-Cavanaugh ..... Secretary for Ship Operations/ Small Business Center/Public Services
Trixi M. Coughlin ..... Secretary for Public Information Office
William E. Crowningsheild ..... Utility Maintenance Mechanic
Mary S. Crumedy ..... Secretary for Marine Division
Louie H. Cullom ..... Maintenance Mechanic
Joanne M. Dagenhardt ..... Secretary for Business and Engineering Divisions
Carol A. Daniel ..... Secretary to Director of Financial Aid
Amelia S. Dixon ..... Scheduling Technician
Wallace L. Fisher ..... Boatswain
Linda M. Flowers ..... Executive Secretary to the President
Dorothy H. Flynn ..... Switchboard Operator
Gina L. Garris ..... Evening Programs Technician
Pauline George ..... Evening Audio Visual Clerk
Frankie G. Green ..... Executive Secretary to the Dean of Evening Programs
Margaret C. Harris ..... Secretary for Vocational Division
Patricia C. Hawkins ..... Computer Services Technician
Karen Hester ..... Secretary for Evening Programs
Janet E. Howard ..... Audio Visual Technician
Nixon B. Howard ..... Technical Coordinator for Audio Visual
Janet L. Huddleston ..... Secretary for the Programmed Instruction Center
Linda B. Jacobs ..... Secretary for Continuing Education
Juanita J. Jezewski ..... Secretary for Library
Shirley King ..... Receptionist
Constance G. Kraynak ..... Executive Secretary to the Dean of Instruction
Regenia A. Lewis ..... Secretary for Student Affairs
J. David Long ..... Shipping and Receiving Technician
R. Gwen Maready ..... Secretary for Student Affairs
Clementine Marshburn ..... Secretary for Continuing Education in Pender County
Shirley Marie Millis ..... Marine Technician
Betty R. Mintz ..... Purchasing Clerk
David C. Monaghan ..... Marine Technician
Sandra J.Moore ..... Secretary for Student Affairs
Judy A. Morris ..... Secretary for Electronics Division
Harriet S. Needham ..... Library Clerk

Betty J. Northam ..... Switchboard Operator
Anne C. Odin ..... Library Technician
Elizabeth B. Perry ..... Audio Visual Clerk
Gloria J. Phelps ..... Printing Department Clerk
Conrad M. Pope ..... Printing Department Technician
Betty R. Price ..... Secretary for Related Division
Bruce A. Raynor ..... Able-Bodied Seaman/Boat Maintenance
Janice L. Reade ..... Business Officer Clerk
Sheila C. Risley ..... Business Office Technician
John C. Roberts ..... Ship's Second Mate
Constance L. Rogers ..... Executive Secretary to Dean of Continuing Education
Dale G. Rusmisell ..... Equipment and Inventory Technician
Jean H. Rusmisell ..... Secretary for Continuing Education
Sadie M. Shaw ..... Secretary for Student Affairs
James A. Smith ..... Waterfront Equipment Technician
Ann W. Tancrelle ..... Secretary for Business Office
Cathy L. Thompson ..... Chemical Technician
James D. Thompson ..... Maintenance Mechanic
Daniel J. Weddle ..... Electronics Technician
Deborah G. Whitman ..... Statistical Technician
Clifton D. Wilkins ..... Maintenance Mechanic
Mary Jo N. Zimmerman ..... Drafting Technician

CAPE FEAR
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